Turning Device

Technical Field

The technical field relating to this invention are in the realms of rotational motion, pulleys, levers, gears, electric motors, bearings, magnetic bearings, carousels and electromagnetic motors and other forms of magnetic and electromagnetic motion.

Background of the Invention:

The invention titled Turning Device, is a device which reduces the weight-load that is required to turn matter. The arts and technologies used in this invention to reduce the weight-load and friction are, Magnetic Energies, Energy Generation, Mixing, Carousel Design, Gyroscopic technology and basic Shelving technologies and arts. The unit's Shelf System is comprised partially with an optional collar of added magnetic ring(s), in which Ring Technology and Adaptive-Collar Technology for engineering were utilized.

In addition to the Primary Base Module being comprised partially of magnets , the wings and shelves being comprised partially of magnets as well. The unit is also configured with a Track System for additional stabilization, the system is designed using physical contact as means of stabilization as opposed to, or in assistance of the magnetic modules. The embodiments and modules comprising this device, have been in use for decades of time at minimum. The arts are explored in education, science, technology, manufacturing and industry globally for decades. In my designs, I have simply rearranged, and reconfigured parts to create an innovative new device with new functions and abilities which also overcomes some global crisis situations when the device is configured in certain modes of operation, where power in the form of electrics are desired.

Brief Summary of the Invention:

The device named the Turning device is thought up, with the function of turning weight-loads, with low-power for industrial equipment. The idea of the inventor is to create a device that can utilize low-power independent sources such as wind, water, mechanical, electromechanical etc, or any other device that can move appropriately the parts needed to move the weight load. The powering of the device is not the object of this patent or its claims. What is being applied for is the utility design and method of weight redirection and how parts and modules are used in situation to each other that results in large weight loads being turned with reduced power applied. To do this task the inventor John Pate uses the repulsive forces of stationary magnets to levitate the weight load and reduce the friction and in effect reduce the torque required to turn the weight-load by use f magnetic force.

The device named the Turn Device is comprised of magnetic modules and and an outer casing with the ability for attachment from an external source of power. The device can handle various weight variances in accordance to adjustments of the magnets and their strength and distance in proportion to each other. In instances of higher weight capacity bearing, the unit itself would be fabricated in scale to function correctly. In instances of lower weight capacity bearing, the unit itself would be fabricated in scale to function correctly. The units can currently be manufactured in macro and micro scales. The unit comprises many parts and modules. One basic module is the Shelf Module which is where the weight-load sits and comprises at minimum one(1) Wing Module and can have additional Pitched Wing Modules, which are the 45* degree angle from the horizon line and are circumferential running around the permitted of the shelf modules and are attached to the Shelf Module(s) and added or subtracted in succession vertically to accommodate various needs. The shelves are round with walls of magnets pitched inward at a 45* degree angle for stability and decreased weight load. The unit also

comprises Track Modules for balance and stability of the turning Shelf Module(s). The unit can handle various weight-load constraints however the scale of the unit must be adjusted in instances where the limitations of force of the magnets comprising the Base Module the Shelf Modules the Base Magnet Array Module and the wing module(s) are not in alignment fo proper functionality of the device, These four modules ares in opposition to each other and repel the weight-load of the of the shelf module unit. The amount of weight capability required to counteract the effects of gravity is directly related to the strength of the magnetic repulsion of the repulsive magnets. This simple composition of magnets creates stable and level turning and reduction of power required to turn the material within. Weight of shelf or shelves = (Base Module to Shelf Base Module repulsive strength) + (Wing Module to the Wing Shelf Module repulsive strength)+ (the 45*degree Pitch wall Module to the 45* Shelf Wall Module repulsive strength). The simple formula to reduce the weight-load by use of opposing force magnetic repulsion through stationary magnets is the core of the idea behind the functionality of the device named Turning Device.

The Turning Device is built with levels that can be added too during the time of manufacturing or multiple units can be stacked on top of each other and use the same drive shaft. The individual units placed on top of each other help with greater force required to lift the load. The cylindrical shape with the Shelf Base Magnet Array extended outward to compose the Wing Module where The Wing magnet Colonnade resides as shown in the figures. The Wing Magnet Colonnade as with most magnet arrays will comprise various size magnets, staggered to create a valley system on one side, and a peak system on the other where in the force of the weight of the load which is applied to the Stability Track System will reduce greatly allowing for ease of turn as it helps the central weight-load balance and remain in a magnetic channel or magnetic groove. If weight-load permits various rings of these magnetic peaks and magnetic valleys can exist running outward and create a situation of a key-lock system assisted by the component of

the physical Stability Track Module optionally, or without will in turn create a system where a small stream can turn a large coil on its own. The device is cylindrical but the housing can be of varied shape and dimensions on the exterior facade. The devices scale and dimensions can be tailored to accommodate weight-load constraints, environmental constraints , needs and other specific requirements.

Detailed List of Preferred Embodiments:

1. Base Array Module
2. Transition Strip
3. Base Material
4. Large Magnet
5. Medium Magnets
6. Ports/Interface Module
7. Hookup Area for Motion Device Attachment
8. Shaft (optional)
9. Cover
10. Interface/Display Module
11. Shelf Base Array Module
12. Outer Case
13. Gully Location
14. Track Module
15. Cover Module
16. Magnetic Stabilization Module
17. Weight-Load
18. Fixed Magnets
19. Inner Magnetic Ring Module
20. Exterior Magnetic Ring Module
21. Track Band Module
22. Lower Gyro Plate Module
23. Central Gyro Plate Module
24. Wing Module
25. Track Motion Module
26. Cylindrical Housing
27. Large Shelf Base Array Module
28. Central Electrical Plate Module
29. Top Electrical Plate Module
30. Magnetic Ring Module
31. Shelf Module

32. Underside of Shelf Module
33. Transition Material / Sheet Material
34. Substrate Module
35. Hole
36. Ledge Module
37. High-Power Magnetic Ring
38. Low-Power Magnetic Ring
39. Unitary-Power Magnetic Ring
40. Depression
41. Central Pin Module
42. Central Passage
43. Plinth
44. Depression
45. Central Opening in Inner Magnetic Stabilization Module
46. Passage
47. Plinth
48. Fastener Locations
49. Hollow Empty Bucket in Shelf Module
50. Pin Passage
51. Door Module
52. Magnetic Ring Strength Line Representation.
53. Door Hinge Module.
54. Door Seam.
55. Door Modules.

Brief Description of the Drawings:

Figure 1A: The circular base of the unit detailing the Base Array Module (1), Base Material (3), Large Magnet (4), Medium Magnet (5).

Figure 1B: Side profile of the base unit with upward-facing magnets, showing Ports/Interface Module (6).

Figure 2: Front view of the outer casing, showing Interface/Port Module (10), Hookup Area for Motion Device Attachment (7), Shaft (optional) (8), Outer Case (12), Shelf Base Array Module (11), and Gully Location (13).

Figure 3: Front view of the outer casing, showing Interface/Port Module (10), Hookup Area for Motion Device Attachment (7), Shaft (optional) (8), Outer Case (12), Shelf Base Array Module (11), and Gully Location (13).

Figure 4A: Upper part of the device with Magnetic Stabilization Module (22), Track Band Module (21), and other components.

Figure 4B: Another view of the device, highlighting additional elements like Lower Gyro Plate Module (17), Interface/Port Module (10), and other internal

components.

Figure 5A: Side view of the unit with multiple shelf modules (21, 24, 25, 26, 27) stacked vertically, showing Track Band Module (21), Lower Gyro Plate Module (22), Central Gyro Plate Module (23), and Plinth (28).

Figure 5B: Extended side view with additional shelf modules and stabilization components.

Figure 6A: Detailed view of the cylindrical housing with multiple shelf units (21, 24, 25, 26, 27), Track Band Module (21), and Plinth (47).

Figure 6B: Additional elements such as the top electrical plate module (29), and more shelf units (30).

Figure 7A: Top view of a single shelf unit, Wing Module (24), Medium Magnet (5), and Base Plate Module (35).

Figure 7B: Top view of the Ledge Module (37) and arrangement of magnets (36).

Figure 7C: Placement of various components such as the Ledge Module (37) and Track Module (26).

Figure 7D: Cylindrical stabilization module (49) and associated parts like Wing Module (24) and track stabilization elements (30).

Figure 7E: Side view detailing the Weight-Load (17) and Wing Module (24).

Figure 8A: Stacking of shelf units with stabilization modules (25) and track elements (14).

Figure 8B: Top view of interior layout with focus on stabilization rings (32) and Wing Module (24).

Figure 8C: Arrangement of stabilization rings (38) and additional elements like magnets (5).

Figure 8D: Central stabilization structure with High-Power Magnetic Ring (41), Low-Power Magnetic Ring (42), and Unitary-Power Magnetic Ring (43).

Figure 8E: Transition materials (34), colonnades (37), and central stabilization features (51).

Figure 9A: Side view of a shelf module, Weight-Load (17), Wing Module (24).

Figure 9B: Front view with multiple shelf modules inside, Cylindrical Housing (33).

Figure 9C: Front view with multiple stacked shelf modules, interior configuration.

Figure 9D: Extended front view with multiple shelf modules within cylindrical housing.

Figure 10A: Side view of base module, Weight-Load (17), Central Pin Module (45), Central Passage (50).

Figure 10B: Detailed view of base module with Gully Location (13), Interface/Port Module (10), Central Passage (50), and Depression (44).

Figure 11A: Top view of base module, High-Power Magnetic Ring (41), Low-Power Magnetic Ring (42), Unitary-Power Magnetic Ring (43), Depression (44), Medium Magnet (5).

Figure 11B: Magnetic ring strength diagram, key-fit peak and valley system with Magnetic Ring Strength Chart (52).

Best Mode of Carrying Out the Invention:

These teaching disclose a a few of the many possible designs this simple concept elucidates the reader on in regard to the weight of the load and the energy required to turn the load being reduced by variations of magnetic lines of force in arrangement to achieve this desired outcome of levitating a singular or a plurality of shelf units on a sturdy substrate while displacing the weight through magnetics and assisting in motion if needed by induced lines of magnetic flux.

Figure 1A shows the circular base of unit and calls out Part no.1 Base Array Module, it also calls out the (3) Base Material, the (4) large magnet, as well as the medium magnet (5) and the outer jacket (2). Also located on this drawing the areas designated as (44) depression and (46) Central Passage both are areas of negative space where open air exists in a non vacuum environment, It is depicted as the second ring and inward in the drawing. The passage entrance is situated on the depressed side of the depression and its deepest point and center of the depressions outer wall and edge.

Figure 1B shows a side profile of the same device while situated on the floor with the magnetic lines of flux facing in an upward and rolling directionally. It shows an exemplary situation of the the Base Array (1) and the (6) Ports/Interface module. This Base array panel is situated with circular magnets and the configuration of said magnets create an up and down motion as the unit turns.

Figure 1C depicts top view of the Base array panel that is arranged and comprises trapezoid shaped magnets and offer a smooth turn with no undulation. The figure calls out parts no.5 Medium Size Magnet the term medium is referred to as the mid power magnet used inn the exemplary descriptions in this application and does not give

reference to any universal coding of magnetic strengths . Here to shown is the area of durable material suited for the application and referred to as (3) Base Material.

Figure 2 is a front view of the outer casing and is us where the (6) Interface/Port Module, the Hookup Area (7) for motion device attachment. The hook up area is a large flat roof of the device and is where the central drive shaft protrudes through and where attachment can be made from a motor a belt a gear a wind cup etc. When the (8) Shaft, can be utilized by a belt or another device which is attached from the side the optional Cover (9) can be placed over the assembly and the side wall pop-outs of the cover(9) can be utilized for passage of the mounting accessories. The drawing also calls out the (10) Interface Module and its approximate location on the device,
The Shelf Base Array's (11) approximate location inside the machine is approximated. Also shown is (12) Outer Case and (13) approximate location of the gully inside the machine and its low center of gravity in design.

Figure 3 Shows a from view of the unit again but this is a slice through the center of the unit. The interface (10) and central drive shaft (8) are located for familiarity of the viewer and are located with, it also shows the gully (13) location. In a reverse situation where the base would be convex and the shelf concave an alternate magnetic strength ring situation can be established for a key fit situation utilizing gravity to secure the levitating modules stability as well.

Figure 4A is a drawing of a single shelf unit comprising just one Shelf Module (31) and only one (11) Shelf Base Array Module panel where exists the Wing Module (24). The figure depicts the unit with an open front and shows some of the interior components. This unit is designed for lighter weight-load capacity and the (19) Magnet ring(s) Interior Module and the (20) Magnetic Stability Module are omitted. For clarity the (19) Magnetic rings work in conjunction with the (20) Magnetic stability Module

Magnetic Ring Exterior and are installed or omitted for various weight-load capacities. In place of these parts are the (14) Track Module , (25) Track Motion Module which is where the moving parts or solid state magnets are located. This unit also points to (21) Track Band Module which in conjunction with part no.25 Track Motion Module , comprises part No.14 Track Module in total and the embodiments (21) Track band and (25) track motion modules can be a variety of designs working in conjunction to achieve stability of the rotating device. Also shown in this drawing are (6) Ports/interface and (10) Interface/Display.

Figure 4B Shows a comparative drawing which shows the location of the (16) Magnetic Stability Module which is comprised of the (19) Inner Magnetic Ring Module, and the (20) Exterior Magnetic Ring Module, both of which can be adjusted by adjusting power of the (18) Fixed Magnets or by omitting the entire ring or rings. This drawing shows a unit with no (14) Track Module and would in fact need at least one (20) Exterior Magnetic Ring Module and one (19) Interior Magnetic Ring Module for stability. The drawing shows the rings separated by a horizontal line. The (16) Magnetic Stability Module must have at minimum one (19) Inner Magnetic Ring Module and one (20) Exterior Magnetic Ring Module for effective functionality. The other rings comprising number 19 and 20 can be omitted or used as blanks or for balancing if needed, and left without magnets or magnetic charge. Part no.15 Cover Module is pointed. Also shown as (18) fixed magnet is an example of the location in the part no.19 and part no.20 of the 45* degree angle at which their placed to aid in stabilization and to assist in lift capability increasing the devices weight-load capacity. The drawing also calls out situation of the Ports/Interface Module (6) and again the Interface/Display Module (10). The (17) exemplary weight-load is depicted as a Energy Generating Coil to assist in Turning the device reducing further the external power needed too operate the device. Although other units with additional shelf units can house a variety of mixing and turning Modules where the (17) Energy Generation Coil Module is situated above or below. This unit is depicted

as a single shelf unit with a (17) Energy Generation Coil Module. The larger units can be mixed with multiple (31) Shelf Units and be fabricated with or without the (17) Energy Generation Module. The part (17) Energy Generation Module can be located on any Shelf Level if desired at all. All power can come from external parts if desired or can be derived partially or totally from part the (17) Energy Generation Module(s). For units with Additional parts the (17) Energy Generation Module a heavy duty industrial jacket can be situated around unit for safety due to high energy generation levels. Metal jackets comprise various parts and modules to contain magnetic energy however the electrical power generated from a larger unit can be fatal even with a small amount of turning speed operating the device. The Turning device can also be magnetically aligned with fixed magnets to turn on its own without assistance of an external drive.

Figure 5A Is a drawing of a medium sized unit with four (31) Shelf Modules shown in succession stacked above and below each other inside the cylindrical housing and are the area where the (37) High Power Magnetic Ring is housed. This figure shows a unit without the Magnetic Stabilization Module and which utilizes and comprises embodiment (14) Track Module primarily for stabilization of turning shelves (31). As stated earlier the (31) Shelf Module has the ability to house a variety of module classifications, designs and functions for scientific, educational and industrial applications to mention a few. Here we see the (23) Central Gyro Plate, the Lower Gyro Plate Module (22) , the (21) Track Band Module, the (25) Track Motion Module which is affixed to part (26) Cylindrical Housing Module, and aids in stabilization of the central turning Shelf Modules. Also in this figure is the (27) Large Shelf Base Array Module which is a Shelf Base Module that is comprised of large magnets to compensate for the omitting of the (16) Magnetic Stability Module. The (24) Wing Module is pointed to called out and comprises part of and is integrated to the (31) Shelf Module. The (24) Wing Module is comprised of a ring of magnets on the bottom of the module facing downward and is placed on Ledges where their are magnets of opposition to assist in lift

of the central turning mechanism(s). This drawing shows four ledges and four wing modules in conjunction with the(27) Shelf Base Array Module. Also called out is the plinth this can be attached with screws or other types of basic fasteners and accompaniments, the (47) Plinth is used for secure position of the larger turning units. Finally the (37) Ledge Module is shown, this module is circular and is comprised of the magnetic colonnade that opposes the magnetic colonnade situated in the Wing module. The (24) Wing Module floats or levitates just above the (37) Ledge Module and is where alternate weight-load dissipation occurs. The (37) Ledge module exists singularly in a single part in circumferential direction and supports the opposing magnets of the (31) Shelf modules wing magnets. The amount of material to be turned continues to multiply with each Shelf Module part that is added. Do to the elimination of the Magnetic Stabilization Module in this variation. The (14) track module which comprises a heavy gauge long lasting material suited for continuous operation of the device and is considered suitable for whatever scale is fabricated. In lesser scale units the track modules gauge's and material can be altered to accommodate practical requirements in fabrication.

Figure 5B shows the (29) Top Electrical Plate module, the (28) Central Electrical Plate Module which partially comprise the Gyroscope located on the upper portion of the device and is a gyro which transfers electrical current using brushes or shoes. The (16) Magnetic Stabilization module is shown in contrast to Figure 5a where only Ledges and Tracks are shown for lighter weight-load capacity. This unit with the (16) Magnetic Stabilization Module, increases the weight load dissipation and stabilizes the central turning parts. This variant also uses a fitted magnet array panel as seen in figure 1C which offers a smooth turn as opposed to Figure 1A which produced an up and down motion while it turns. The motion of up and down is suited better for the units without the (16) Magnetic Stabilization Module due to the key fit of modules parts no.19 Inner Magnetic Ring Module and parts (20) Exterior Magnetic Ring module and would

counteract the function of the Shelf Base Array module and cause serious damage to the unit during operation. The part (16) Magnetic Stabilization Module reduces weight-load and stabilizes the central turning mechanism due to the pitch or angle they hold. If less weight-load dissipation and more precision turning is required the angles of the part no.18 fixed magnets would vary in one direction. If more weight-load dissipation is required of the device, then the Fixed Magnet Ring module (18), can be angled and calibrated to accommodate these variances. Many magnetic patterns are available to design for different performance ratings that are required. All magnetic, paramagnetic and diamagnetic parts and angles of deflection or attachment of magnetic or electrical load can be calibrated to accommodate various needs of the user. For instance the (19) External Magnetic Ring Module could be angled multiple times with multiple rows of magnets in each Ring module of the Magnetic Stabilization System Module, in addition to the one depicted in the drawings, with one row of magnets per ring. Additionally many other variants can be conceived for various needs. As stated before the device can turn without the assistance of an outside drive with configuring the magnetic patterns alone, after which the magnets would need recharging, or, to be physically replaced every so often, to keep correct turning and correct timing of the device. Whichever patterns are made the (19) inner magnetic ring module and the (20) exterior magnetic ring module are to key-fit each others magnetic fields of flux and be effective to each other in regards of stabilization of the Central Shaft System.

Figure 6A Shows a larger system where six Shelf Modules are stacked upon the primary lower shelf system which is partly comprised of the Base Array Module. This elongated variation is capable of seven(7) times the workload of the primary version which is comprised of one Shelf Module (31). This drawing depicts the unit without the (18) Magnetic Stabilization Module and features the (14) track system for stability. This drawing also calls out 23) Top Magnet Array Panel and is calibrated to repel the central shelf system and help the roof track by counteracting upward pressure from the magnet

array, magnet colonnades and upward force of the Magnet Stabilization module. The Roof Track is not shown in this drawing but is circular and fixed to the roof of the (26) Cylindrical Housing that the Central Shelf System is situated inside of during operation. This system is used in conjunction with the Roof Array module (23) and (22) so the parts and modules that move in an up and down motion have absorption of force, while turning, to prevent damage to the device by cushioning the upward force placed on the roof track module and the roof of the Cylindrical housing and parts comprising it. The drawing points to (21) Track Band Module which is situated around the Shelf Module and is a secondary stabilization module. This module is attached by means of fasteners or the like. This module can be used in conjunction with the Magnet Stabilization System if one or more Magnet Ring Module is omitted.

Figure 6B Shows the contrast of figure 6A in which the unit is equipped fully with the (16) Magnet Stabilization Module in place of the (14) track module and the (21) Track band module. It is still comprised of the (14) Track Module along the outer edge of (24) Wing Module. The drawing points to the (25) Track Motion Module and also shows locations of the (14) Track module. The drawing shows (30) Magnet Rings which comprise part no. 16 magnet Stabilization Module and are the ring modules stacked on top of each other to create the(16) Magnet Stabilization Module. Here to the (29) Top Gyro Plate Module and the (28) Central Gyro Pate Module are shown. In this variation the pressure absorption system in not needed. With the use of the (16) Magnet Stabilization Module and the fitted Shelf Base Array Module there is no up and down motion. Eliminating the need for such an assembly of parts, as is it is not required for the functionality or health of the device. The (47) Plinth is shown with a rectangular opening for the (6) Ports/Interface hookup location.

Figure 7A Shows a drawing of the bottom view of the (31) Shelf Module and shows the location of the (24) Wing Module which is the circular portion comprised of

part no.51 Colonnade, which is partially comprised of part no.5 medium sized magnets. The term “Medium Magnet” refers to the median sized magnet used for the device, it does not denote any particular size outside the scope of the device itself. Also shown is the (35) Base-Plate which is an integral part of the (31) Shelf Module. On the lower most (31) Shelf Module would be situated the (11) Shelf Base Array, which is replace by a non magnetic part (35) Base-Plate on the units above the primary (31) Shelf Module.

Figure 7B Shows a top view of the inside of part (26) Cylindrical Housing. The part no.37 Ledge Module which partially comprises part no.26 Cylindrical housing and is where the part (51)colonnade is situated and which helps dissipate the weight load by repulsion of magnets. This figure also shows locations of the (5) Medium Magnets situation in the (51) Colonnade. The figure also shows the (36) Hole, which is the central hollowed portion of the (26) cylindrical Housing, and is the area where the (31) Shelf Module turns inside the device.

Figure 7C Shows another top view looking down at the the (26) Cylindrical Housing Module and points to its interaction and situation inn regards to the positioning of the (25) Track Motion Module and gives a reference as to where they are located in the device. The device itself may comprise many more than are shown in this figure . The figure shows only three(3) Track Motion Modules however many more can be located in the unit. The drawing does not depict the total number of moving parts known as the (25) Track Motion Module and only shows three Track Motion modules instead of the total number which could reach into the hundreds per ring depending on scale and specifications needed in various build situations. The drawing also shows exemplary depiction of the (37) Ledge Module and (5) the Medium Magnet Colonnade and their interactions upon the device. The outer ring of the drawing is the (26) Cylindrical Housing Modules outer jacket. This figure also shows only a representation of the actual number of (5) Medium Magnets and their approximate locations, magnetic properties and

physical properties. The (37) Ledge module can be filled with magnets but is preferable to simply line the surface requiring the discharge of controlled magnetic flux, and has no spacing large enough without magnetic parts so the (31) Shelf Module does not bottom out or defect otherwise and continues to levitate uninterrupted. If there are large gaps between the magnets the unit will not function correctly. The unit needs constant, level, and balanced repulsion, which means no space can be left without magnetic force on the colonnades, and the magnets force must fill the areas between the (37) Ledge and the (24) Wing Module without spacing between the magnetic fields that are large enough to cause interruption in effective repulsion, and more so must be situated to have constant repulsive effect upon each other. The magnets shape can be varied and altered or can exist in a combination of shapes. The importance is that no area is left with large gaps where there is no magnetic repulsion and that the magnetic energy overlaps each other in succession around the colonnade to avoid defects in function of the (31) Shelf Module and to keep the Shelf Module balanced and without wobble or defect of turning function. The amount of magnets can vary and can be different in shape between the part no.37 Ledge and part no.24 Wing module, as long as proper balance and function is achieved.

Figure7D Shows a perspective drawing of the (16) Magnetic Stabilization module and shows how the (30) Magnetic Ring Module which is situated at a pitched angle and where stability and lift are partially derived in the device. It points to the (24) Wing Module which is a separate module and connected to the (19) Inner Magnetic ring assembly which comprises in part the (16) Magnetic Stabilization module. The figure shows three levels of ring modules and the base-plate module. The (48) Fastener locations are where the (19) Inner Magnetic Ring is attached to another base-plate or another part no.19 Inner Magnetic Ring module to extend the piece further upward in continuous, synchronous motion. The unit as stated before is designed with multi use and functionalities in mind and each shelf can turn independently or in conjunction to each other by attachment accessories or lack of attachment accessories, and has the capability

for interchangeable parts to meet users specific needs performance requirements. Also seen is the door hinge module (49) with an arrow pointing to the central opening in the (19) Inner Magnetic Stabilization module and shows its hollow bucket-like features.

Figure 7E Shows the weight load which figure 7D sits around. And shows the space in which material may occupy which is the object needing turning (17) Weight-load and profile of the (24) Wing module.

Figure 8A Shows an exemplarily the side view of the upper portion of a unit that has omitted the Magnetic Stabilization Module and is comprised using the Track System alone for stability and balance. The (25) Track Motion module is designed to adjust slightly in a vertical manner to accommodate for magnetic strength/charge loss over time. The unit must be built in accordance that the track itself does not become dis-level during decent or ascent and remain in perfect plane with the 0* degree horizon.

Figure 8B Depicts the bottom view of the Shelf module and shows the colonnade of magnets embedded in the part no.24 Wing module which is part of the shelf base module. The fixed medium size magnets shown are circular but can be arranged in many patterns and dimensions including triangular, square, trapezoidal, rectangular etc.. The area marked (32) represents the underside of the Shelf Module and the approximate location of the weight load and Magnetic Stabilization Module (if used) above to clarify for the reader the situation of parts in the orthographic views.

Figure 8C is a top view looking down at the device it shows again the basic composition of parts and how the device operates. It shows the level at which the circumference of the (25) track motion modules are in comparison to the alternate ones resting next in line in concentric direction moving outward.

The drawing Shows the (26) Cylindrical Housing from the top view with the roof and cover parts removed. It shows the (37) Ledge Module, and how the (5) Medium Fixed magnet, in the (25) Track Motion module's general locations and vectors too each other. This drawing shows only two (25) modules situated on the Ledge (37), and two (25) Track Motion modules located on the outer edge of the Ledge where the secondary and upper Track module is situated and which stabilizes the top of each Shelf module. Again as stated earlier the (25) track motion module can have hundreds of units in ring formation depending on scale and other factors. At minimum even on the smallest scale of macro units should be four of the (25) track motion modules.

Figure 8D Shows a bottom view of the (31) Shelf Module, which is comprised, in part, by the Wing module, the (35) Base-Plate module, and the (14) track module. In this drawing we see the (17) weight load as a section marked by black and white stripes and which occupies the central area of the circular shaped diagram of the Shelf Module. The (2) Transition Strip is shown and is where the trapezoid shaped magnets are situated in the drawing. The base-plate (17) is a slated piece with hollow strips running from end to end, the plate and pattern should be balanced to offer multiple points of attachment, durable enough for stability and insure it can support the weight to be turned. This hollow space between solid parts enables the operator to use each level as a pass-through or as a shelf, Each shelf in the unit can also be equipped with a custom fitted bucket with various options of composition of materials and could include, options such as Glass, Wood, Plastics, Grapheme, Epoxy, Carbon Fiber, metallics , alloys, etcettera. Other examples of options the bucket can include are, a central pass-trough cutout and accessories. The device entitled Turning Device is designed to be user friendly and accommodate various needs of the user. The object of the area is to create a surface that is easily attachable, simple to pass materials through , simple to block off if needed, while balancing the weight of the grid or slats so the levitation is kept level and supply a floor

for materials or accessory buckets to rest and be secured. It has many parts and modules that can be modified and utilized in a variety of capacities and is designed for ease of scientific and industrial research and is adaptable and configurable at a moments notice. Finally shown is the (14) Track Module that is attached to the (24) Wing Module in a circumferential direction and conjoins with the (14) Track module located on the adjacent wall of the (37) Ledge Module, which also is connected in circumferential direction around the interior hollow cylindrical housing.

Figure 8E Is a drawing of a top view of the units hollow cylindrical housing that the shelf module(s) are situated in during operation. The drawing calls out the approximate locations and vectors of parts comprising the (26) Cylindrical Housing module. The (33) Transition Material is shown and is seen separating the rubber protective layer from the primary substrate material of construction non limiting materials could include wood, metal, plastics, air, aand the like of the substrate (3) Base Construction Material, which in itself should be a material that is relatively neutral in reaction to electricity and magnetism. The unit can be fabricated to accommodate glazing parts for the use of various materials with varied properties and characteristics in research and industry. Part no.34 substrate jacket is comprised of an aluminum alloy system, wherein the parts comprising the module are designed for structural support of the device and to create an additional jacket of protection from magnetic and electronic wave radiation, current ca be sent to ground through an electrical conduit when used in electronics applications. The (53) Door Hinge module is shown and the area denoted (54) Door Seam is also shown and is where the unit is opened and shelves can be inserted and arranged as needed. The units two doors and one stationary part are shown and there is shown more than 51% open area for the disc/cylindrical shaped shelves to be arranged without obstruction of parts. As shown the unit is built in protective layers that serve as jackets for a variety of containment matter, and can be interchanged with materials comprising them, but also serve in structural purposes as well. Transparent windows for

monitoring are set at intervals and are coated to prevent wave leakage. The (55) Door module is pointed to with two arrows, one for each door. An arrow points to the (51) Colonnade which is the ring of trapezoidal shaped stationary magnets comprising the (37) Ledge module. This is an example of one way of manufacturing the device other ways may include units that are unable to be opened or serviced with a door but may require the unit to be dismantled completely to service, the units being discussed in these examples are for smaller magnetic arrays with weaker strength ratings than would require specialty equipment and machinery too load and unload thee magnets and specialty vehicles used in servicing the high powered magnets for larger industrial applications. For larger units the outer casing would essentially translate into its buildings outer shell. The units being discussed here are within the realm of safe for home , office and laboratory use as well as magnetic strengths acceptable for hobbyists and science enthusiasts.

Figure 9A Shows again the Shelf Module (31). On the same page shares Figure 9B , Figure 9C and Figure 9D. Figure 9B shows a singular shelf unit, Figure 9c shows single shelf units stacked on-top of each other and utilizing the same drivetrain, and Figure 9D show comparatively a unit fabricated with multiple Shelf Modules stacked upon each other.(all three of these drawings show devices equipped with the the (16) Magnetic Stabilization Module and only one (14)Track Module.

Figure 10A Shows an orthographic view of the (11) Base Array module it also shows (17) Weight-load and adds the (45) Central Pin module which is situated inside the (44) Depression. This drawing also shows the (50) Passage which is an opening through the center of the unit and where conduit and other material can be passed and or situated. The device can house many diverse pieces of material and equipment and this (50) Passage is where these parts for information passing and electro or chemical communications may take place, to name a few of the uses the operator may designate for

the device. If you notice the (11) Base Array module is convex in shape in this drawing. I use this coupled with a magnetic tread for stability of the (31) Shelf module as it turns.

Figure 10B Shows the base of the device and its basic inner construction. This is another orthographic side view. This drawing shows the concave design that cradles the (11) Base Array module . This the Module where the entire shelf system is balanced upon and is comprised of Magnetic interlocking technology, where in the force of various strength magnets in ring design working in concentricity create traction and hold the central turning shaft system in place and rooted properly, while the wing colonnades and Magnetic Stabilization module assist in balance of this system and help deter erratic strafing and and other unwanted actions from the base. The area denoted (13) Gully Location denotes concave physical shape while the magnetic locking system will be explained in later drawings and can compliment or oppose the physical dimensions with lines of flux of various vectors and properties. The (44) Depression 1s located in the center of the base and is where the (45) Central Pin module resides. (45) Central Pin module comprises high power magnets with no magnets or low power magnets below in the (44) Depression. This module has a (50) Passage that connects to (44) Depression and where an opening connecting both parts exists and where mater can be passed through. The (50) Passage leads to the (10) Ports/Interface of the exterior of the device.

Figure 11A This exemplarily drawing shows a top view of the Base of the machine where the (31) Shelf Module levitates above. The drawing shows various strength levels of magnetic rings arranged in concentric circles to farm a locking mechanism where in strafing will not occur in any direction. The (44) Depression is located in the center and can be equipped with or without a low-power magnet. This part is where the central pin module with the high power magnets fit into. The (41) Central Pin Module shows a ring of High-Power magnets where in the flux of the magnetic field will help prevent strafing from the adjacent (42) Low-Power ring which is its direct

opposite of the High-Power magnetic ring above it and located on the (11) Shelf Base Array which is shown in Figure 11B. The next concentric ring in this drawing of Figure 11A is the (42) Low-Power Magnetic Ring and is where a ring of low power magnets are located to key fit the High-Power Magnetic Ring module located above on the (11) Shelf Base Array. After which the next ring outward is (41) again which is a High-Power magnetic Ring which above is a situated a Low-Power Magnetic Ring Module. Next ring in concentric direction of outward is part no.43 Unitary-Power Magnetic Ring which is a power of magnet calibrated to hold the desired weight and is in the “medium angle” of Magnetic Power located in the Shelf Base Array module and the (1) Base Array module. The (43) Unitary-Power Magnet ring continues until the last and outer most ring where the power of the magnetic field in reduced to Low-Power fixed magnets and where the opposite High-Power Magnetic Ring located above and on (11) Shelf Base Array module exists and further locks the base in place from strafing and shifting. The two modules work in conjunction to lock the base in place with the same basic ideology as many clutches designed for motorcycles and automobiles are constructed. This device uses magnetic fields instead of physical parts such as metals to accomplish the same basic effect. The same basic principles of locking magnetic waves into one another to move machinery can be designed add infinitude. Also part no.5 Medium Size Magnet is shown for perspective of size not power. The entire situation of High to low power magnets can be reversed from part no. 11 and part no.1 and the same effect of locking mechanism will be accomplished. For zero or low gravity situations an opposition of force would need to be inserted upon the central turning shelf assembly, where normal weight from gravity load would be negated, however the insertion of the device into a low or zero gravity environment, in itself, would reduce the need for this arrangement of parts known as the Turning Device. However, the unit is equipped with the Track Module and Magnetic Shock Absorption Module on the ceiling of the interior hollow chamber of the cylindrical housing, so it can be utilized effectively in zero or low-gravity environmental conditions, adjustments to magnetic strengths ,will, in most instances, be required. For Zero or low-

gravity the ceiling in this device is considered the side of the cylindrical shape furthest from part no.1 Base Module. Part no.1 Base Module is the part in which the concave cradle/gully (13) is located.

Figure 11B Shows the bottom orthographic view of the (11) shelf Base Array module. This diagram depicts the opposite magnetic power ring situation that crates the magnetic channel anti-slip mechanism which prevents strafing. Part no. 46 shows the threshold of the opening for part no.50 Passage to connect through. Directly around part no.46 Opening part is part no.41 High-Power Magnetic Ring which fits into part no.44 Depression and reduces the ability of the shelf unit dislodging as a wall of magnetic energy will constantly push the part no.45 into the depression if it attempts to dislodge. On this drawing of part no.11 Shelf Base Array module the first concentric ring outward from the central pin/depression parts is (42) Low-Power magnetic ring which cradles the High-Power magnetic ring below in its field and while the opposing magnetic ring on the (1) Base module keeps the part (45) centralized in the (44) Depression it also helps keep a division of the next concentric ring of High-Power magnetic ring which is in opposition to the (1) base ring of the same spacial location. The pattern continues and the opposing magnetic strength rings are placed in opposition of each other and as in the last drawing of the base array the outer ring of magnets is altered here too. However this drawing depicts the opposite strength of the last ring, bringing it to Low-Power state where in a magnetic trench or gully will form and the High Power ring located directly above on the (11) Shelf Base Array will slip into and remain disallowing further the discs to slip or strafe. Motion can be created as well by configuration of power and shape of these twox magnetic array modules. If one desires a device fabricated so it always turns or turns on the reliance of a few electromagnets in the array firing to prevent constant motion that too is easily adaptable.

Figure 11C Shows the magnetic ring strength diagrams above and below each

other with the magnetic force approximation between the two. As you can see with the opposing magnets it creates a key-fit peak and valley system to keep the central shelf assembly operating correctly and helps prevent the lower end from unnecessarily creating weight load shifts and destructive pressures on the rest of the machine and track parts, the variable magnetic force peaks and valleys system also reduces the strength requirements for the Magnetic Stabilization module. Many different patterns of peaks and valleys can be achieved by rearranging strengths of magnetic rings modules add infinitude. The drawing shows (52) magnetic strength line and matches vertically to the upper and lower magnet arrays for clarity and understanding of the reader.

Figure 12 A, B, C : Shows three size variations finished in their outer casing and ready for installation and placement. These are orthographic line drawings of the finished product with the cover on and no pop outs for exterior drive and no ports or interface connected.12A would have the most shelving units, 12B the least amount of shelving units or perhaps only one, and 12C could be a larger unit the size of a modern day built in home kitchen dishwasher, comparatively.

Figure 13A, B, C, D, Shows clockwise from top left; Front view , top and bottom views are mirrored and shown as the same diagram 13B , next is the rear view located on the bottom right of the page and finally both side views are shown in one diagram at the bottom left of the page.

Figure 14 Shows four drawings of an outer heavy duty industrial rubber cabinet that can be placed around and underneath and above the unit if operator desires. The unit blocks water from entering, allows for airflow and like other modules of the device has screens in its vents for grounding electricity, electrostatic energy and magnetic forces while keeping the unit dry and ventilated from overheating or sealed.

Detailed Description of the Invention:

The invention titled Turning Devices a device that reduces the weight load of material as it turns said weight-load. The device has many practical applications in today's global industries. The unit can be set up with an external drive for power or the magnet arrays can be calibrated to force a continuous turn movement. The unit is cylindrical shaped in design with a rectangular outer casing.

This device is very simple to fabricate and can be made at home by a teenager in his or her garage. The parts and materials needed have all been in public use for decades to centuries. The device is a reconfiguration of many known arts and technologies.

The first drawing 1A shows the Base Module (1) , this piece can be made of Ceramics, or wood or a combination of material suited to hold the weight load of the upper portions of the device. Steel and other alloys can be used as well for the base material because the repulsive force will dis-allow the unit from sticking to the metal underneath the Base Array Panel. It is better to be made of a material that is non-diamagnetic however, if one is used that can sustain time and reassure. The base can be poured in alloy in a foundry or made with cementation mixes or plastic composites or a variety of other manufacturing processes if the unit is used in a scale where the dimensions are larger than 30 feet the materials used for fabrication may vary, an example would be a unit which is only a foot or smaller in size and where plastics may be preferred over steel reinforced concrete parts used in a larger scale industrial capacity or a micro designed unit for micro fluid transfer systems and pumps utilizing low voltage input or utilized in piezoelectric fluid circuitry in modified form. The mold is fabricated leaving room for the magnet array to be set into after the base is formed. The passage and

depression should be put into the mold at this point otherwise drilling will be required to open these parts for allowance of matter to pass through. After the part has set up by means of cooling or vulcanizing the stationary magnets can be installed and fixed with adhesive and fitted with screws from underneath the unit. The transitions between stationary magnet parts and the face of the base unit should be smooth and true and free of lips or protrusions, whatever shape of magnet is used. The central Cylindrical housing can be made of alloys or wood or another material. These materials will not effect the turning of the device as all magnets used to lift and stabilize the device will not have interference from a metal such as steel due to the stationary magnets situated on the cylindrical housing side creating a field of opposing magnetic flux that turn the central shelf module, therefore the magnets that turn will not get stuck, nor become interference in the turning motion of the device. The cylindrical housing is cylindrical on the outside and hollow on the inside with ledges located on the inner hollowed portion. Many alloys, woods, ceramics and composites can be arranged to create these two main parts of the device.

Within the Cylindrical housing are the magnet stabilization modules which molds can be made of or a C and C router can cut out, and where the fixed magnets are embedded in ring modules. The ports and interface components can be purchased easily along with the fixed magnets in a variety of shapes. The magnets are fixed to the Magnetic Stabilization rings which encircle the main weight-load in the center of the Shelf Modules. The tracks can be poured from molds and the track motion parts the same, after which the track module can be attached to the inside of the Cylindrical Housing module and aligned with the opposite track parts located on the Shelf Modules wings and secondary upper stability locations by means of tightening screw or other fastener . Technology. The (11) Shelf Base Array module can be fabricated to match the Base Array module below it by pouring or cutting out with a C&C machine or the like. The cylinder itself comes in three vertical sections that have hinges and two of the three

panels open as doors do with at least 51% fifty one percent open ratio in the circumferential direction, so when both doors are open the Shelf Module can be installed without interference from the Cylindrical housing itself after the stabilization units are installed. The other stabilization modules can be installed on the door sections of the cylindrical housing. The units ports and interfaces will attach by fasteners by way of screw holes that are aligned with the screw holes on the ports and interface components and be secured in this or similar manner.

The plinth can be made of various materials however as stated before if this device shall be equipped with power generation coils the less metals and electric conducting materials used would be advisable as not to cause an arc or other type of electrical accident. The only part that could need a non magnetic part are the (37) edge, if the weight load is small and there are few magnets comprising it then the additional magnets on the Wing module could snag the magnetic reactive material and stick causing ineffectual properties of the device. If the device is set for a high weight load and there is no point where the magnetic field can stick due to the opposing fixed magnets creating a barrier field by preventing the flux of the opposing magnet from sticking to the metal and stalling the device. The magnetic stabilization modules should be made of a lightweight ceramic composite or the like and can be reinforced with carbon fiber straps or the like substrate, to avoid fracture or breaking over time from being attached below to the Shelf Base and possibly above to another Shelf unit in a taller unit wherein the shelves are stacked upon each other.

The Gyroscope and plates associated with can be made of various materials the Gyro is capable of transferring electricity, fluid and gases and each variety can be insulated and arranged so no explosions or defects will occur from the electricity arcing or other defect caused by electron flow which aides in activation of a fluid or gaseous element unless that is the desired outcome.

Other shelf modules and mixing modules that work in conjunction with this device can be added in later design patents. The screens on the vents and the passages will be made with stainless steel or another material that attracts electricity and sent to ground to avoid accidents or static charge damage to the units magnets and possibly to the materials comprising the weight-load requiring mixing.

The exterior casement can be made of many materials that do not conduct electricity or react to magnetism, or can be made out of sheet metal with a rubber coating on one or both sides. The sheet metal can be cut and folded, spot-welded and fastened to itself. The exterior is similar to the exterior of an Air Conditioning Compressor unit or a modern dishwasher or refrigerator casing. This device is very simple to manufacture. If higher end materials are used in the fabrication the price on manufacturing will most likely be higher.

INDUSTRY

Industrial Applications:

Material Handling and Conveyance:

Warehouse Automation: The device can be used in automated warehouses to move heavy goods with minimal energy, reducing operational costs and increasing efficiency. Assembly Lines: It can be integrated into assembly lines to transport parts and components, enhancing productivity by reducing the effort required to move items.

Robotics:

Manufacturing Robots: The device can be used in manufacturing robots to handle heavy parts with precision and low energy consumption.

Service Robots: In industries like hospitality and healthcare, robots equipped with this technology can move and operate more efficiently.

Transportation:

Electric Vehicles: The technology can be used to reduce the weight and friction in electric vehicle components, such as motors and wheels, increasing the range and

efficiency of the vehicles.

Conveyor Systems: In airports and shipping centers, the device can be used in conveyor belts to reduce energy consumption and maintenance costs.

Machinery and Equipment:

CNC Machines: The device can reduce the friction and energy required for precise movements in CNC machines, enhancing their performance and longevity.

Lifting Equipment: It can be integrated into cranes and other lifting devices to handle heavy loads more efficiently.

Everyday Life Applications:

Home Appliances:

Refrigerators and Freezers: Using this technology in the shelves and drawers can make them easier to move and adjust, reducing the effort required.

Washing Machines and Dryers: It can be used to reduce the energy consumption of the rotating drums.

Furniture and Storage:

Adjustable Shelving Units: The device can make it easier to adjust and move shelves, especially in kitchens and garages.

Office Furniture: Desks, chairs, and filing cabinets can be designed to move and adjust with minimal effort.

Fitness and Rehabilitation Equipment:

Exercise Machines: Equipment like treadmills, stationary bikes, and weight machines can benefit from reduced friction and energy consumption.

Rehabilitation Devices: It can assist in creating smoother and easier-to-use devices for physical therapy.

Consumer Electronics:

Computers and Laptops: The technology can be used to cool components more efficiently by reducing the friction in cooling fans.

Gaming Consoles: It can enhance the performance and energy efficiency of mechanical parts in gaming consoles.

Toys and Gadgets:

Remote-Controlled Devices: The technology can be used to make toys and gadgets more efficient and easier to use.

Wearable Tech: Reducing the weight and energy consumption of wearable devices like smartwatches and fitness trackers.

Healthcare Applications:

Medical Equipment:

Patient Lifts: It can be used in patient lifts to handle heavy loads more efficiently and safely.

Diagnostic Machines: Devices like MRI and CT scanners can benefit from reduced friction in their moving parts.

Prosthetics and Orthotics:

Prosthetic Limbs: The technology can be used to create lighter and more energy-

efficient prosthetic limbs.

Orthotic Devices: It can improve the functionality and comfort of orthotic devices

Agriculture Applications:

Automated Farming Equipment:

Harvesters and Planters: The technology can reduce the energy consumption and maintenance of automated farming equipment.

Irrigation Systems: It can improve the efficiency of moving parts in irrigation systems.

Cyclotron , or a centrifuge device if the s By equipping the unit with interchangeable shelves designed for various specific purposes, its versatility and usefulness can be significantly extended. Here is a detailed list of 50 potential applications using the new data:

Industrial and Laboratory Applications:

Mixing Fluids: Specialized shelves for mixing different fluids efficiently.

Mixing Gases: Shelves designed for the controlled mixing of gases.

Cyclotron: Using power generation coils and specialized shelves to accelerate particles.

Centrifuge: Interchangeable shelves for separating components in a mixture by density.

Chemical Processing: Shelves with corrosion-resistant bins for mixing and processing chemicals.

Pharmaceutical Manufacturing: Shelves designed for mixing pharmaceutical ingredients.

Biotechnology: Shelves for mixing and culturing biological samples.

Food Processing: Shelves for mixing and processing food ingredients.

Paint Mixing: Shelves designed for mixing different types of paint.

Cosmetic Manufacturing: Shelves for mixing cosmetic ingredients.

Polymer Mixing: Shelves for blending polymers and plastics.

Beverage Mixing: Shelves for mixing beverages and syrups.

Oil and Gas: Shelves for mixing drilling fluids and other petrochemical processes.

Water Treatment: Shelves for mixing chemicals in water treatment plants.

Agricultural Chemicals: Shelves for mixing fertilizers and pesticides.

Power Generation and Energy Applications:

Energy Generation: Shelves equipped with power generation coils to produce electricity.

Wind Energy Storage: Using the device to store energy from wind turbines.

Hydroelectric Support: Assisting in the storage and management of hydroelectric energy.

Solar Power Storage: Shelves for storing and managing solar energy.

Battery Charging: Using power generation coils to charge batteries.

Portable Power Stations: Creating mobile power units for remote locations.

Electric Vehicles: Providing an energy-efficient charging system for electric vehicles.
Environmental Applications:
Air Purification: Shelves designed for mixing and distributing air purification chemicals.
Waste Treatment: Shelves for mixing chemicals used in waste treatment processes.
Recycling: Shelves for separating and processing recyclable materials.
Pollution Control: Shelves for mixing and distributing pollution control chemicals.
Medical and Healthcare Applications:
Medical Centrifuge: Specialized shelves for separating blood and other biological samples.
Vaccine Production: Shelves for mixing vaccine components.
Pharmaceutical Testing: Shelves for mixing and testing pharmaceutical formulations.
Sterilization: Shelves for sterilizing medical instruments and equipment.
Research and Development Applications:
Material Science: Shelves for mixing and testing new materials.
Chemical Research: Shelves for conducting chemical reactions and experiments.
Biological Research: Shelves for culturing and mixing biological samples.
Physics Experiments: Using the device as a cyclotron for particle physics research.
Environmental Research: Shelves for testing and developing environmental solutions.
Piezoelectric fluid and gel agitation device
Everyday Life Applications:
Home Brewing: Shelves for mixing ingredients for home brewing beer or other beverages.
Kitchen Appliance: Shelves for mixing ingredients in cooking and baking.
Laundry: Shelves for mixing detergents and other laundry chemicals.
DIY Projects: Shelves for mixing paints, adhesives, and other materials for home projects.
Gardening: Shelves for mixing fertilizers and soil amendments.
Educational Applications
Science Education: Shelves for conducting science experiments in schools.
Vocational Training: Shelves for training in chemical and pharmaceutical mixing.
University Research: Shelves for advanced research projects in universities.
Commercial Applications
Product Development: Shelves for mixing and testing new products.
Quality Control: Shelves for testing the quality of various products.
Small-Scale Manufacturing: Shelves for producing small batches of products.
Safety and Emergency Applications:
Disaster Relief: Mobile units for mixing and distributing emergency supplies. Firefighting: Shelves for mixing firefighting chemicals. Hazardous Material Handling: Shelves for safely mixing and handling hazardous materials.
Miscellaneous Applications:
Art and Craft: Shelves for mixing materials used in arts and crafts projects.

By simply switching the shelves to those designed for specific tasks, this versatile device can serve a wide range of purposes across various industries and everyday applications, making it an incredibly valuable tool.

Environmental and Economic Benefits:

By reducing the energy required to move heavy loads, the Turning Device offers significant environmental benefits, including lower carbon emissions and reduced reliance on fossil fuels. Economically, it lowers operational costs and increases efficiency in various industrial processes.

Customization Magnetic Configurations:

The magnetic configurations can be customized to achieve different performance characteristics. This includes adjusting the strength, angle, and placement of magnets to optimize the device for specific tasks and environments.

Safety Features:

The device includes safety features such as a non-conductive outer casing and grounding for electrical components to prevent accidents. The robust design ensures safe operation even in demanding industrial settings.

Innovative Track System:

The device is equipped with a track system for additional stabilization. This system uses physical contact to assist the magnetic modules, ensuring that the shelves remain stable during operation.

Energy Generation Capability:

The Turning Device can be equipped with energy generation coils, allowing it to produce electrical power as it operates. This feature makes it a dual-purpose device, providing both mechanical motion and power generation.

Specific Use Cases

Industrial Automation:

In automated warehouses, the Turning Device can move heavy goods with minimal energy, reducing operational costs and increasing efficiency.

Robotics:

In manufacturing robots, the device can handle heavy parts with precision and low energy consumption, improving productivity and reducing operational costs.

Transportation:

The technology can be applied to electric vehicles to reduce weight and friction in components such as motors and wheels, enhancing range and efficiency.

Healthcare:

The device can be used in patient lifts and diagnostic machines to handle heavy loads more efficiently and safely.

Agriculture:

In automated farming equipment, the Turning Device can reduce energy consumption and maintenance of harvesters, planters, and irrigation systems.

The Turning Device represents a significant innovation in the field of rotational motion and energy efficiency. Its ability to reduce the power required to move heavy loads, coupled with its versatility and scalability, makes it a valuable tool across various industries. The integration of magnetic levitation, customizable configurations, and energy generation capabilities positions it as a forward-thinking solution for modern industrial and commercial applications.

By means of exemplary energy production.

here are some basic statistics applied to this invention the Turning Device.

To estimate the amount of electricity that a 6-foot high by 2-foot diameter unit can generate using a low voltage electric motor to turn it, we'll need to make some assumptions and use some standard calculations related to power generation with copper coils. Here's a step-by-step approach:

Assumptions

Efficiency: We assume high efficiency due to magnetic levitation reducing friction.

Coil Configuration: We'll assume a configuration similar to that used in axial flux generators, which are known for their compact design and high efficiency.

Magnet and Coil Specifications:
Number of coils: 10 per level.
Number of levels: 10.
Each coil generates a certain voltage and current based on the speed of rotation and the magnetic flux.
Calculations:
Basic Parameters:
Height of the unit: 6 feet (1.83 meters).
Diameter of the unit: 2 feet (0.61 meters).
Radius of the unit: 1 foot (0.305 meters).
Speed of Rotation:
Let's assume the motor can turn the unit at 300 RPM (revolutions per minute).
Magnetic Flux and Coil Specifications:
Assuming each coil is wound with copper wire to generate a voltage of 1V per 1000 RPM per coil. For 300 RPM, each coil would generate 0.3V.
If each coil has 200 turns, and each turn produces 0.3V at 300 RPM, then each coil generates 0.3V * 200 = 60V.
Current Generation:
Let's assume each coil can produce a current of 0.5A at 60V.
Power per coil: P = V * I = 60V * 0.5A = 30W.
Total Power Generation:
Number of coils per level: 10.
Number of levels: 10.
Total number of coils: 10 levels * 10 coils per level = 100 coils.
Total power: 100 coils * 30W per coil = 3000W or 3kW.
Final Estimate:
Efficiency: We assume high efficiency due to magnetic levitation reducing friction.
Coil Configuration: We'll assume a configuration similar to that used in axial flux generators, which are known for their compact design and high efficiency.
Magnet and Coil Specifications:
Number of coils: 10 per level.
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Total Power Generation:

Number of coils per level: 10.

Number of levels: 10.

Total number of coils: 10 levels * 10 coils per level = 100 coils.

Total power: 100 coils * 30W per coil = 3000W or 3kW.

Final Estimate:

Given the above assumptions and calculations, a 6-foot high by 2-foot diameter unit equipped with copper coil power generators, turned by a low voltage electric motor, can potentially generate around 3kW of electrical power.

Notes:

The 3 kW of electrical power estimated in the previous calculations represents the instantaneous power output of the device. Here’s a detailed explanation of what this means:

Instantaneous Power Output

3 kW (kilowatts) is the amount of power the device can produce at any given moment when it is operating under the specified conditions (e.g., 300 RPM, 100 coils, etc.).

This means that as long as the device is running at the specified conditions, it can continuously produce 3 kW of power.

Energy Production Over Time

To understand how much energy this device can produce over different periods, we need to consider the duration of operation. Energy is typically measured in kilowatt-hours (kWh), which represents the amount of power produced or consumed over time.

Per Hour:

If the device runs continuously for 1 hour, it produces:

3 kW×1 hour=3 kWh

3 kW×1 hour=3 kWh

So, the device can produce 3 kWh of electrical energy every hour.

Per Day:

If the device runs continuously for 24 hours, it produces:

3 kW×24 hours=72 kWh

3 kW×24 hours=72 kWh

So, the device can produce 72 kWh of electrical energy every day.

Per Minute:

If the device runs continuously for 1 minute, it produces:

3 kW×160 hour=0.05 kWh
3 kW×601 hour=0.05 kWh
Since 1 kWh is equal to 1000 watt-hours (Wh):
0.05 kWh=50 Wh
0.05 kWh=50 Wh
So, the device can produce 50 Wh of electrical energy every minute.

Summary

Instantaneous Power: 3 kW.
Hourly Energy Production: 3 kWh.
Daily Energy Production: 72 kWh.
Per Minute Energy Production: 50 Wh.

These values assume the device operates continuously at the specified conditions. The actual energy output may vary depending on the operating conditions, efficiency, and any potential downtime or interruptions in operation.

Here are some additional calculations using various exemplary sizes.

1 foot by 1 foot @ 300 RPM

Efficiency: Assume high efficiency due to magnetic levitation.
Coil Configuration: Similar to an axial flux generator.
Magnet and Coil Specifications:
Number of coils: 10 on the single shelf.
Each coil generates a certain voltage and current based on the speed of rotation and the magnetic flux.

Calculations:

Basic Parameters:
Height of the unit: 1 foot (0.305 meters).
Diameter of the unit: 1 foot (0.305 meters).
Radius of the unit: 0.5 feet (0.1525 meters).
Speed of Rotation:
Assume the motor can turn the unit at 300 RPM (revolutions per minute).
Magnetic Flux and Coil Specifications:
Assume each coil is wound with copper wire to generate a voltage of 1V per 1000 RPM per coil. For 300 RPM, each coil would generate 0.3V.
If each coil has 200 turns, and each turn produces 0.3V at 300 RPM, then each coil generates 0.3V * 200 = 60V.
Current Generation:
Assume each coil can produce a current of 0.5A at 60V.
Power per coil: P = V * I = 60V * 0.5A = 30W.
Total Power Generation:
Number of coils on the single shelf: 10.
Total power: 10 coils * 30W per coil = 300W.

Final Estimate:
Given the above assumptions and calculations, a device that is 1 foot tall and 1 foot in diameter with a single shelf equipped with copper coil power generators, turned by a low voltage electric motor, can potentially generate around 300W of electrical power.
Notes:
Efficiency: Real-world efficiency might be lower due to various factors like electrical resistance, heat loss, and imperfections in magnetic levitation.
Optimization: The design can be optimized further by adjusting the number of coils, the number of turns per coil, the strength of the magnets, and the speed of rotation.
Summary:
Instantaneous Power: 300W.
Hourly Energy Production: 0.3 kWh.
Daily Energy Production: 7.2 kWh.
Per Minute Energy Production: 5 Wh.
These values provide an estimate of the electrical power generation capability of a smaller device with the specified dimensions and configurations. If you need more precise calculations or adjustments, additional specifications and measurements would be required.

1 foot by 1 foot 30 RMP

Assumptions and Parameters:
Height of the unit: 1 foot (0.305 meters).
Diameter of the unit: 1 foot (0.305 meters).
Radius of the unit: 0.5 feet (0.1525 meters).
Speed of Rotation: 30 RPM (revolutions per minute).
Number of Coils on Single Shelf: 10.
Magnetic Flux and Coil Specifications
Assume each coil generates a voltage of 1V per 1000 RPM per coil.
For 30 RPM, each coil would generate:
Voltage per coil=30 RPM1000 RPM×1 V=0.03 V
Voltage per coil=1000 RPM30 RPM×1 V=0.03 V
If each coil has 200 turns, and each turn produces 0.03V at 30 RPM, then each coil generates:
0.03 V×200 turns=6 V
0.03 V×200 turns=6 V
Current Generation:
Assume each coil can produce a current of 0.5A at 6V.
Power per coil:
P=V×I=6 V×0.5 A=3 W
P=V×I=6 V×0.5 A=3 W
Total Power Generation:

Number of coils on the single shelf: 10.
Total power:
10 coils×3 W per coil=30 W
10 coils×3 W per coil=30 W

Final Estimate:
Given the above assumptions and calculations, a device that is 1 foot tall and 1 foot in diameter with a single shelf equipped with copper coil power generators, turning at 30 RPM, can potentially generate around 30W of electrical power.
Summary:
Instantaneous Power: 30W.
Hourly Energy Production: 0.03 kWh.
Daily Energy Production: 0.72 kWh.
Per Minute Energy Production: 0.5 Wh.

These values provide an estimate of the electrical power generation capability of the smaller device with the specified dimensions and configurations when rotating at 30 RPM.

Oath and Declaration:

I John Pate believe that I am the original inventor of a claimed invention in the application. I hereby acknowledge that any willfully false statement made in this declaration is punishable by fine or imprisonment of not more than 5 years, or both.

Signature : /John Pate /

John Pate Inventor and applicant

Turning Device

Thursday June 6th, 2024

Claims for Turning Device

Claim 1.

The invention Turning Device comprising a substrate with magnetic parts incorporated into its design, which is used for levitation of its internal shelf units which incorporate magnets in its design and which repel the magnetic force from the magnets of the substrate which in turn creates levitation from the opposing magnetic lines of flux emitting from the shelf the magnets are integrated with, the invention has the capability to angle and arrange various strength, sized and shaped magnets to create levitation and motion, which is determined by where and how the magnets are angled and pitched in relation to each other and the lines of force which interact to create these desired effects, this is a device that reduces the torque required to turn the connected parts and matter by means of magnetic levitation, magnetic propulsion assistance is also achievable and well within the capacity of composed embodiments by means of magnetic repulsion and magnetic attraction principles and carried out by the magnetic embodiments and architectural attributes which produce the desired effect of reduction of the weight required to be turned and to reduce the energy required for turning.

Claim 2.

The Turning Device of Claim 1, is a device that is capable of turning parts and matter, this is accomplished by means of attachment of an external part, or the internal magnets themselves, can be arranged to drive the Shelf or Shelves without an external drive and rely solely, on internal forces.

Claim 3.

The Turning Device of Claim 1 characterized in that it utilizes magnetic levitation to significantly reduce the weight-load required to turn materials. This is achieved through a configuration of stationary and moving magnets that create a repulsive force, effectively reducing friction and the torque needed for rotation.

Claim 4.

The Turning Device of claim 1 can be scaled up or down to accommodate various weight capacities. It can be manufactured in both macro and micro scales, making it suitable for a wide range of applications from industrial applications to electronics to household use.

Claim 5.

The Turning Device of claim 1 is characterized using magnets some of which comprise a circumferential system which incorporates a multi-layered magnetic stabilization module, comprising inner and outer magnetic rings set at various angles. This design ensures stability and balance, allowing for smooth and efficient rotation.

Claim 6.

The Turning Device of claim 1 wherein the device features an interchangeable shelving system that can be customized based on specific needs. Shelves can be added or removed, and each shelf can house various modules, including energy generation coils or other functional components, the interchangeable shelve modules incorporate magnets and levitate within the invention.

Claim 7.

The Turning Device of claim 1 wherein, it is designed to operate with minimal power input, the Turning Device can be powered by low-energy sources such as wind, water, or mechanical input and hookup directly to the gyro plate or a shelf module which makes it an energy-efficient solution for applications requiring low power rotational motion.

Claim 8.

The turning device of claim 1 is constructed from durable materials, the device is designed for long-term use with minimal maintenance. The magnetic components are designed to withstand significant wear and tear without losing efficiency and can be replaceable.

Claim 9.

The Turning Device of claim 1 wherein the magnetic configurations can be customized to achieve various performance characteristics. This includes adjusting the strength, angle, size, amount, and placement of magnets to optimize the device for specific tasks and environments.

Claim 10.

The Turning device of claim 1 is built in such a way that a central pin is inserted into a central depression both assisted by varied power magnets to provide stability through a key fit clutch concentric ring system of magnetic force located where the base magnet array and the gully of the turning device meet and where in the center of each are located one pin and the other depression which will accept the pin. Another way of explaining it is, where the pin and depression would be the central rings off opposing sides of magnetic repulsion the alternating power magnetic rings will exist in concentric repetition as more or less are required and create an interlocking system of peaks and valleys of magnetic force flowing in circumferential channels and preventing strafing or sliding of the central levitation shelf when gravity used or another means of applied pressure.

Claim 11.

The turning device of claim 1 when used in environments where gravity is limited or non existent the magnetic repulsion system on the ceiling of the invention which is currently used for cushioning and placement of the shelves can be reinforced with stronger magnets to keep the shelves situated and the device functioning correctly by the introduction of increased magnetic force to replace the energy variation and the missing variable of gravitational force being converted into unifying rotational motion.

Claim 12.

The turning Device of claim 1 wherein the device is equipped with a track system for additional stabilization. This system uses physical contact or magnetic bearings to assist the magnetic modules, ensuring that the shelves remain stable during operation.

Claim 13.

The Turning Device of claim 1 wherein optionally can be equipped with energy generation coils, allowing it to produce electrical power as it operates. This feature makes it a dual-purpose device, providing both mechanical motion and power generation.

Claim 14.

The Turning Device of claim 1 wherein it comprises stationary magnets for levitation of the weight load to be turned.

Claim 15.

The Turning Device of claim 1 wherein the Device further comprising ledges with magnets that repulse the shelf module further providing additional capability for levitation, stability and motion.

Turning Device

Abstract:

The Turning Device is a utility device designed for turning matter with less than expected energy consumption. The device uses magnets to reduce the weight of the load at the drive which reduces the amount of energy required to turn the load. The magnetic base, wings and rings along with the adjustable stability track offer reliable turn capability over a long period of time and require seldom maintenance once installed. The magnets come in a variety of shapes and sizes and can be arranged to fit your needs.

Fig. 1a

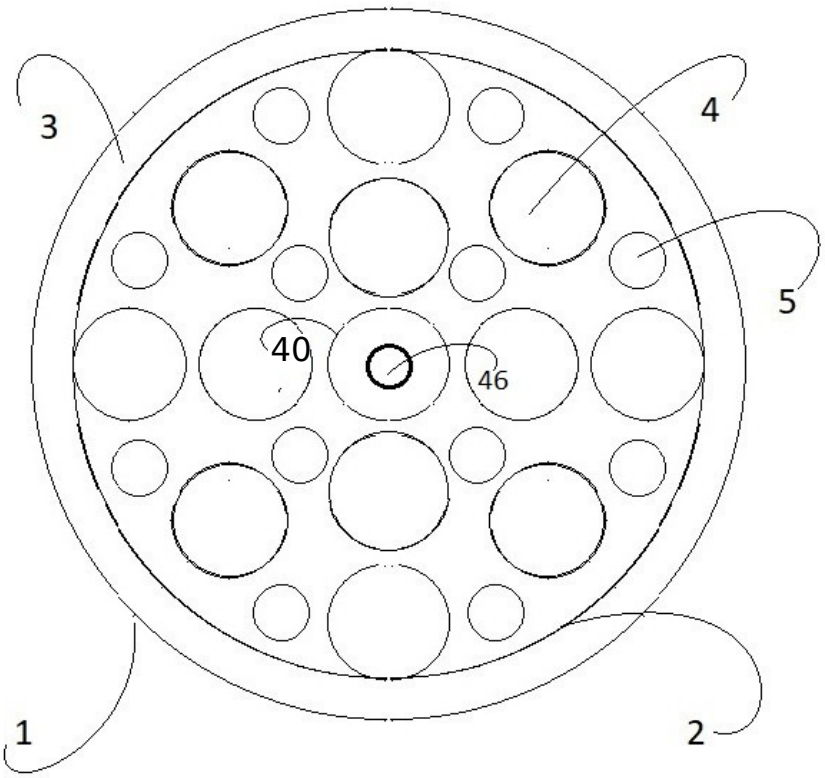


Fig. 1b

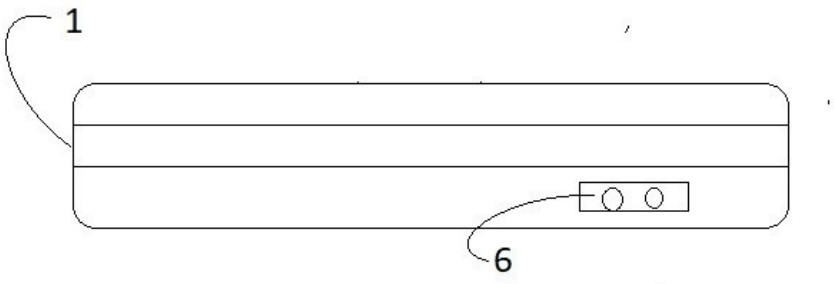


Fig.1c

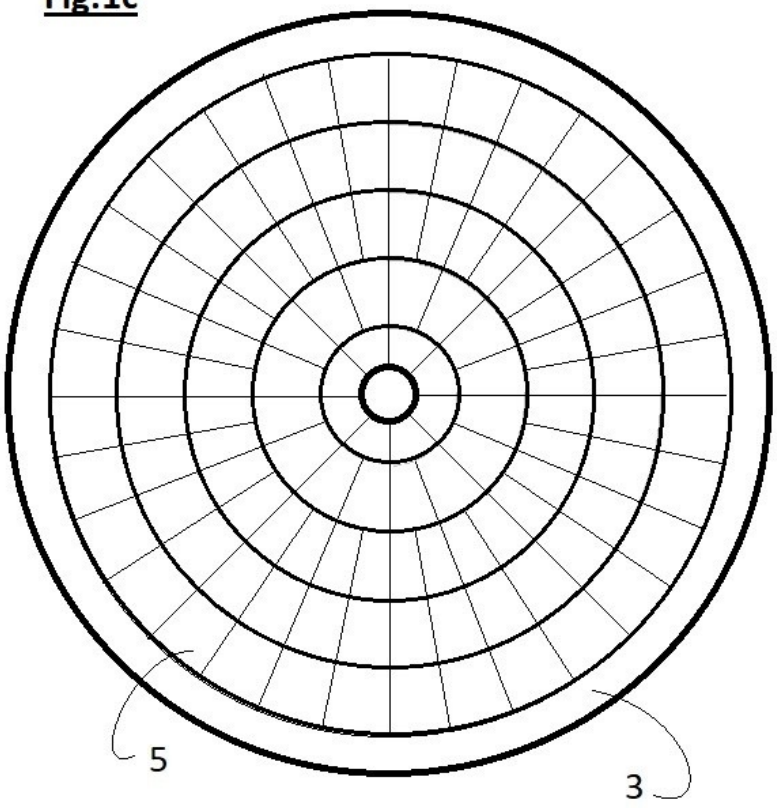


Fig. 2

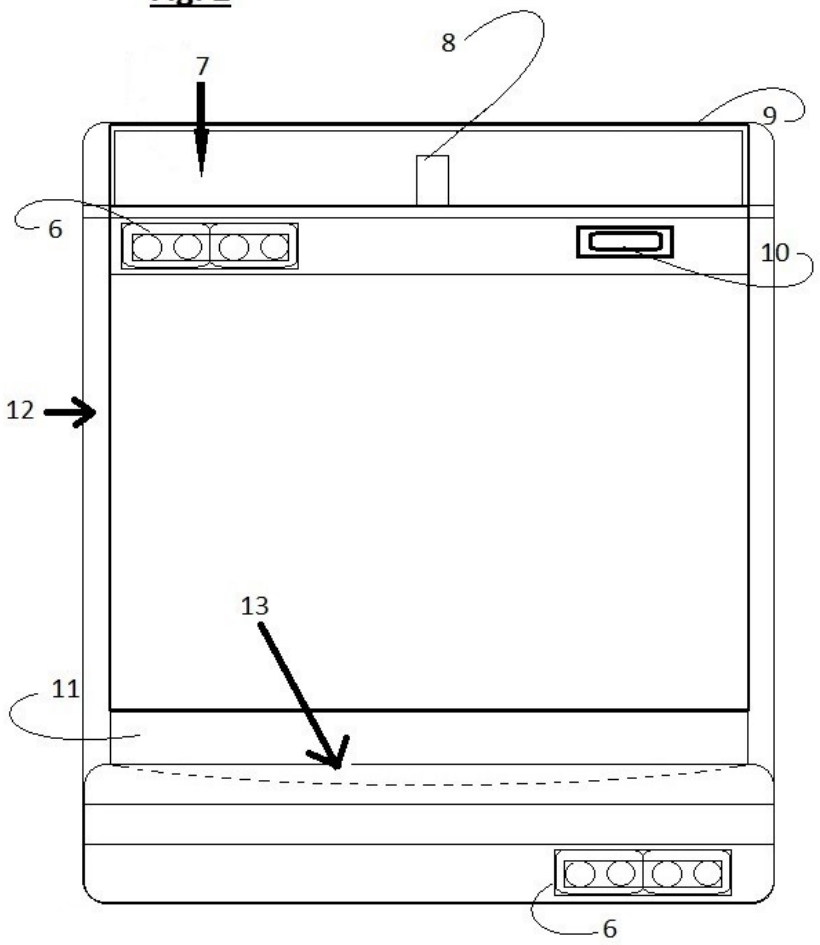


Fig.3

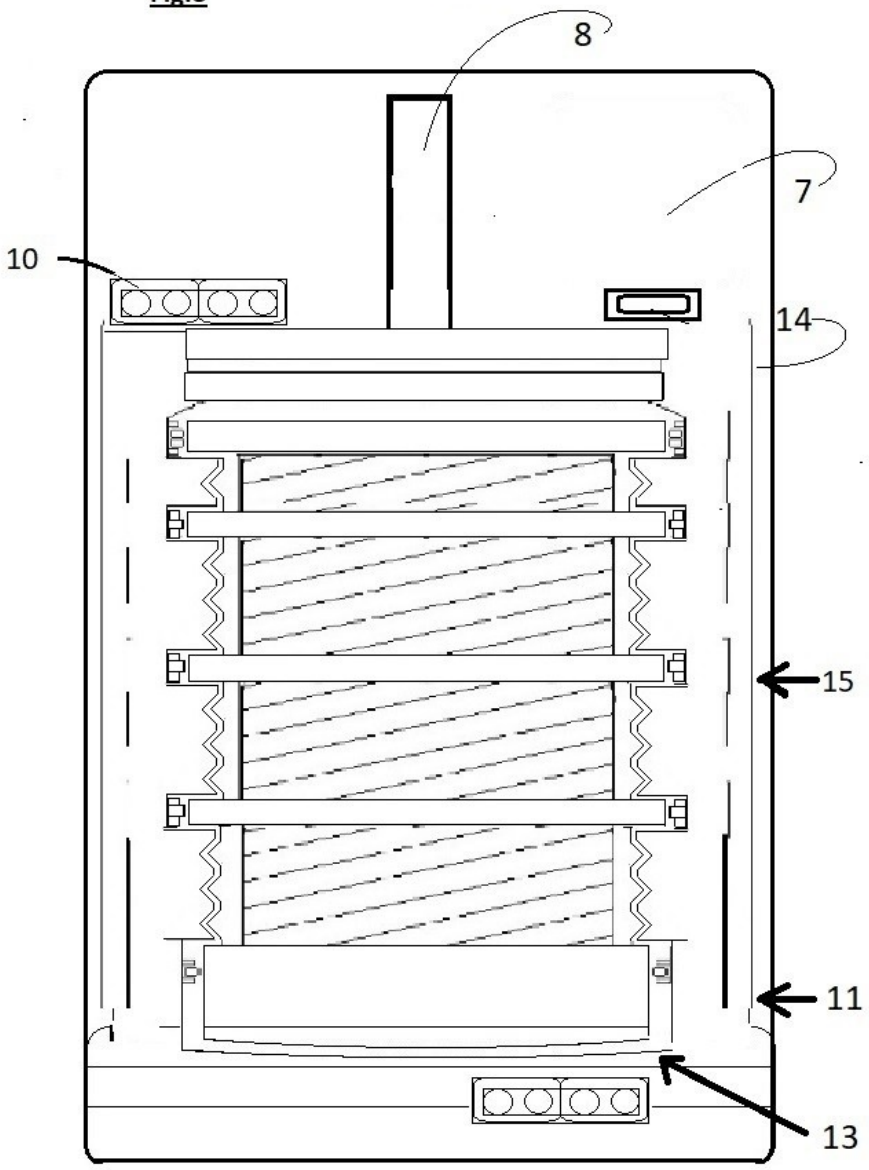


Fig. 4a

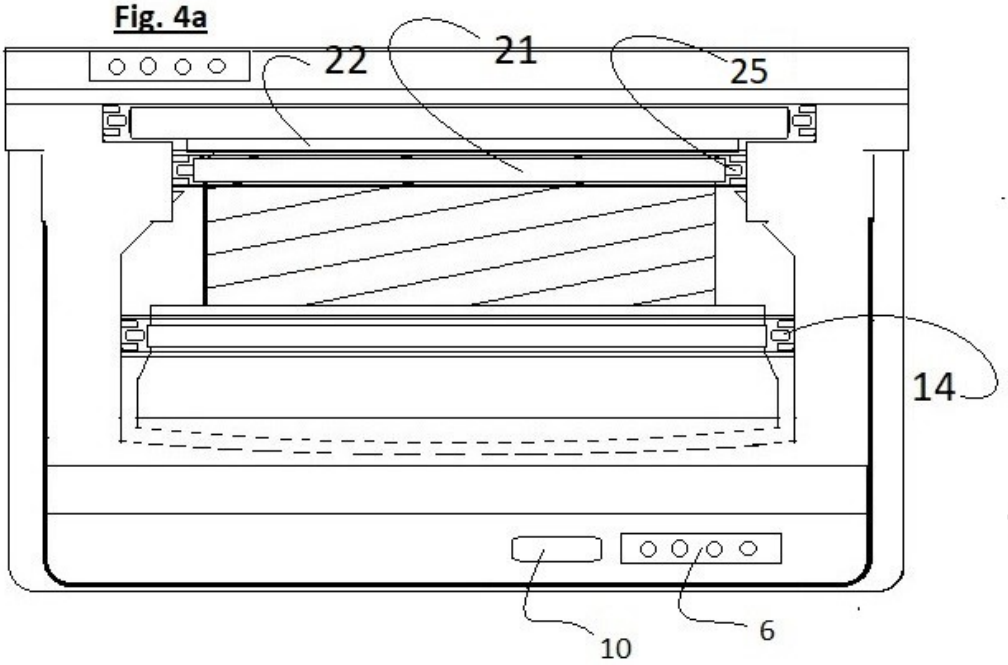


Fig 4b

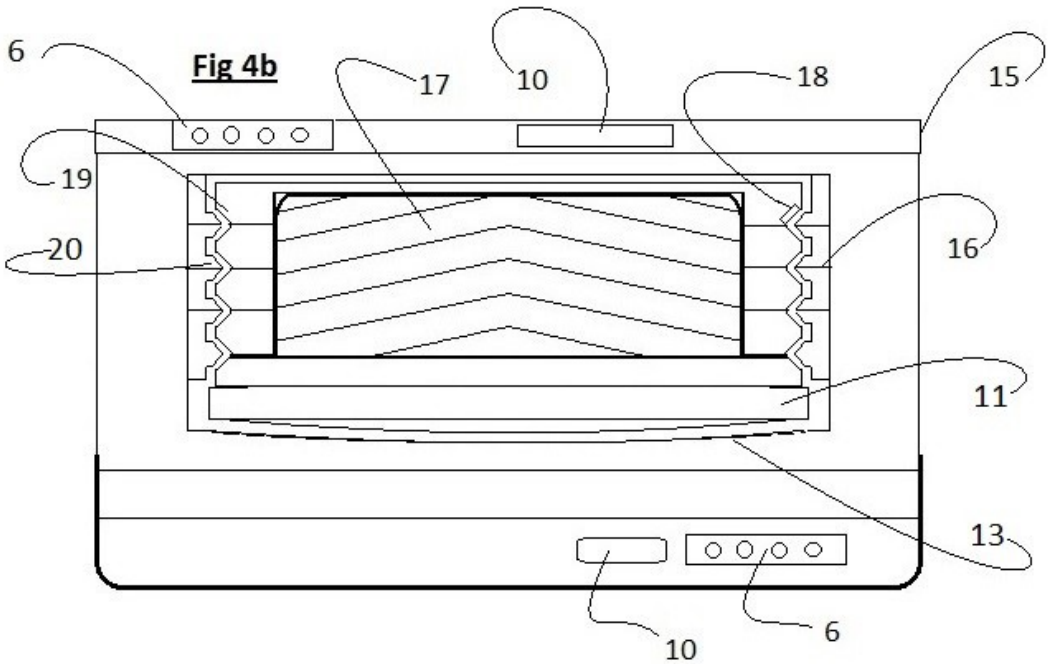


Fig. 5a

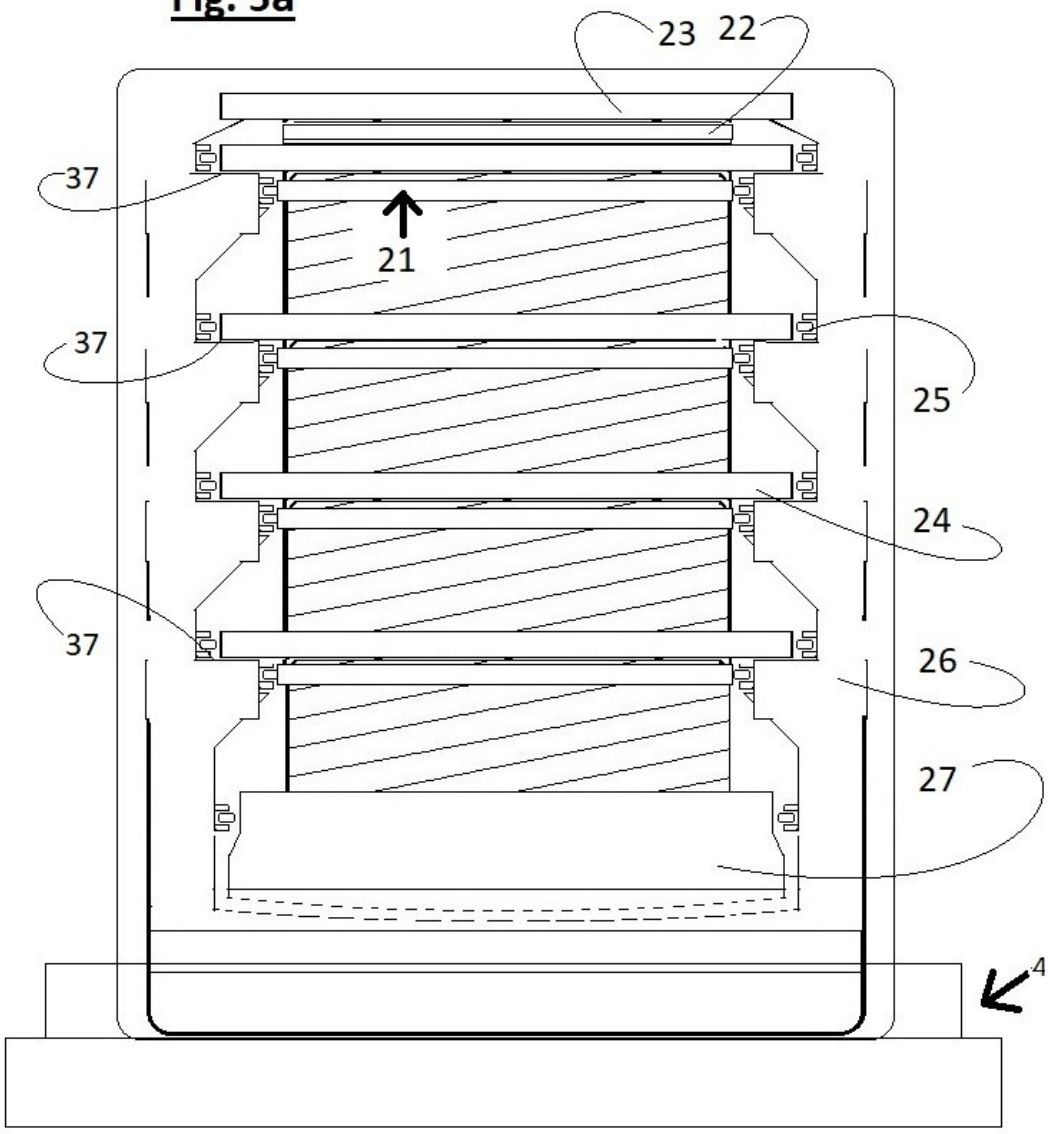


Fig.5b

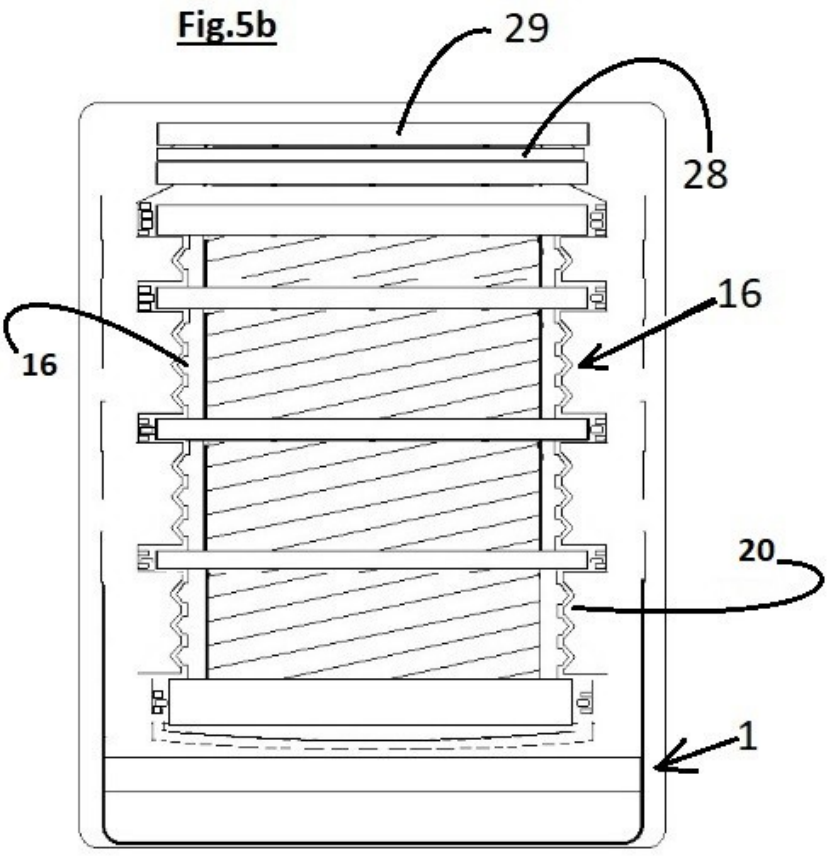


Fig.6a

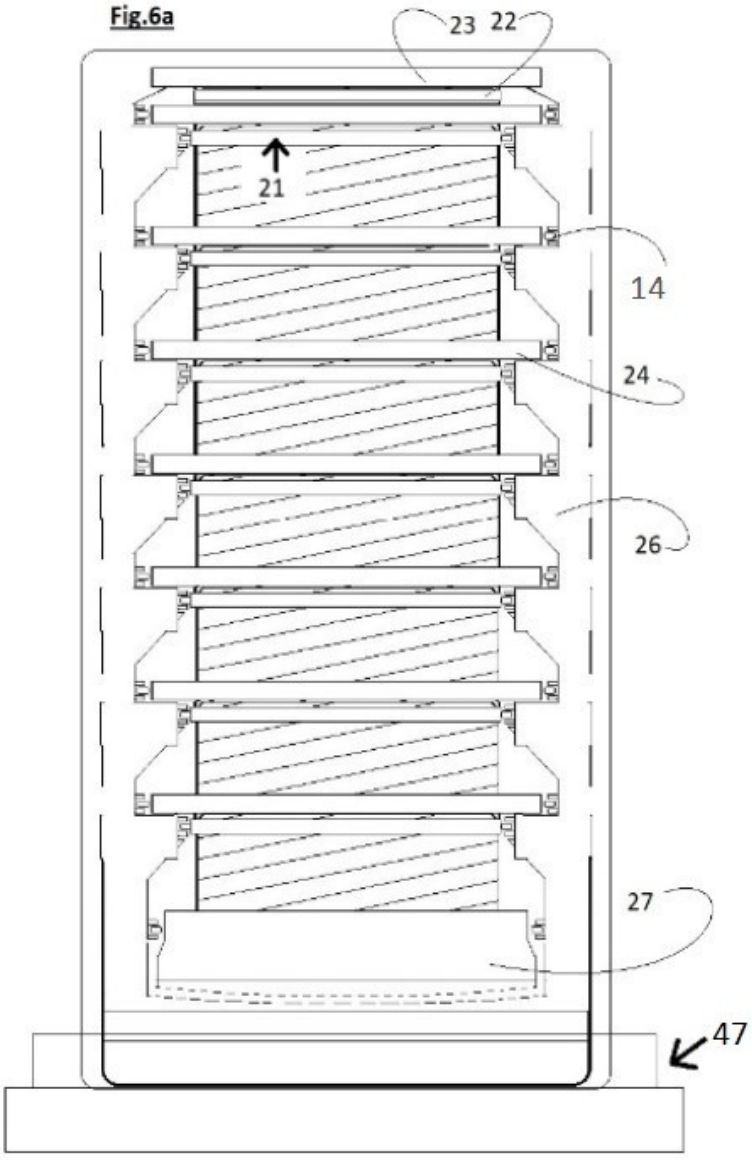


Fig.6b

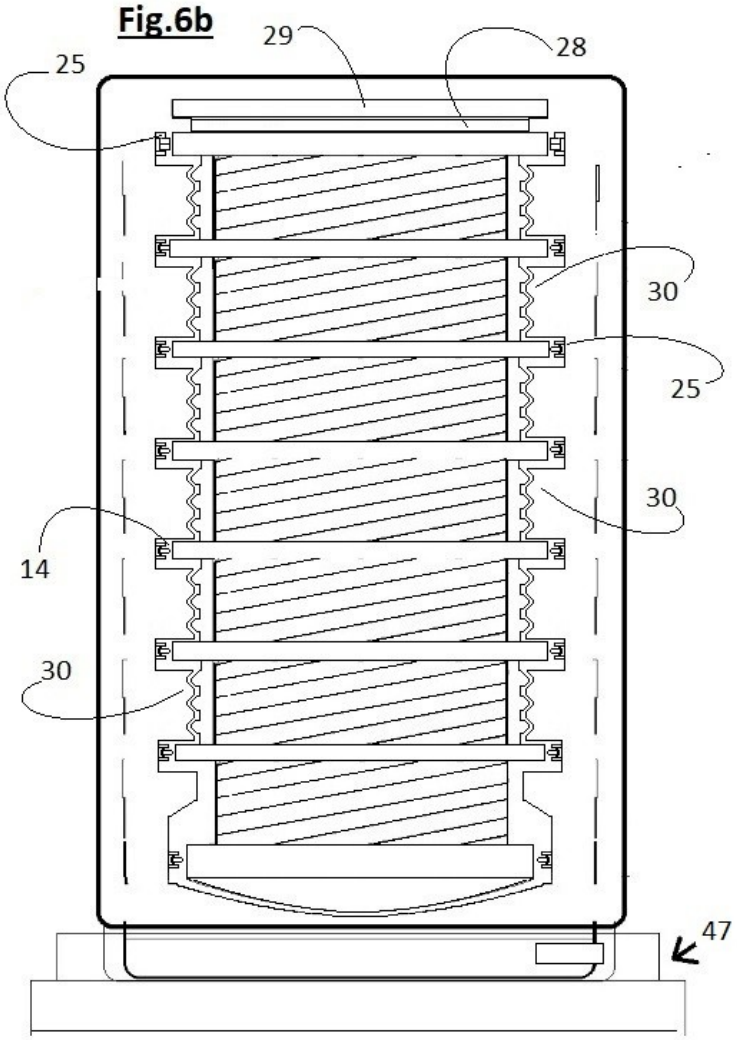


Fig.7a

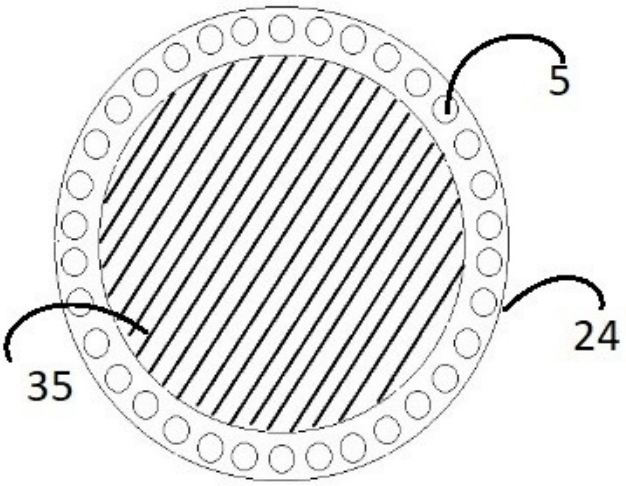


Fig7b

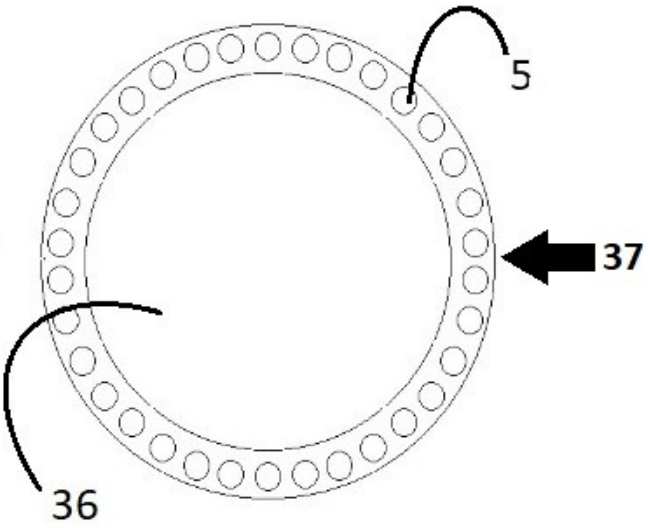


Fig.7c

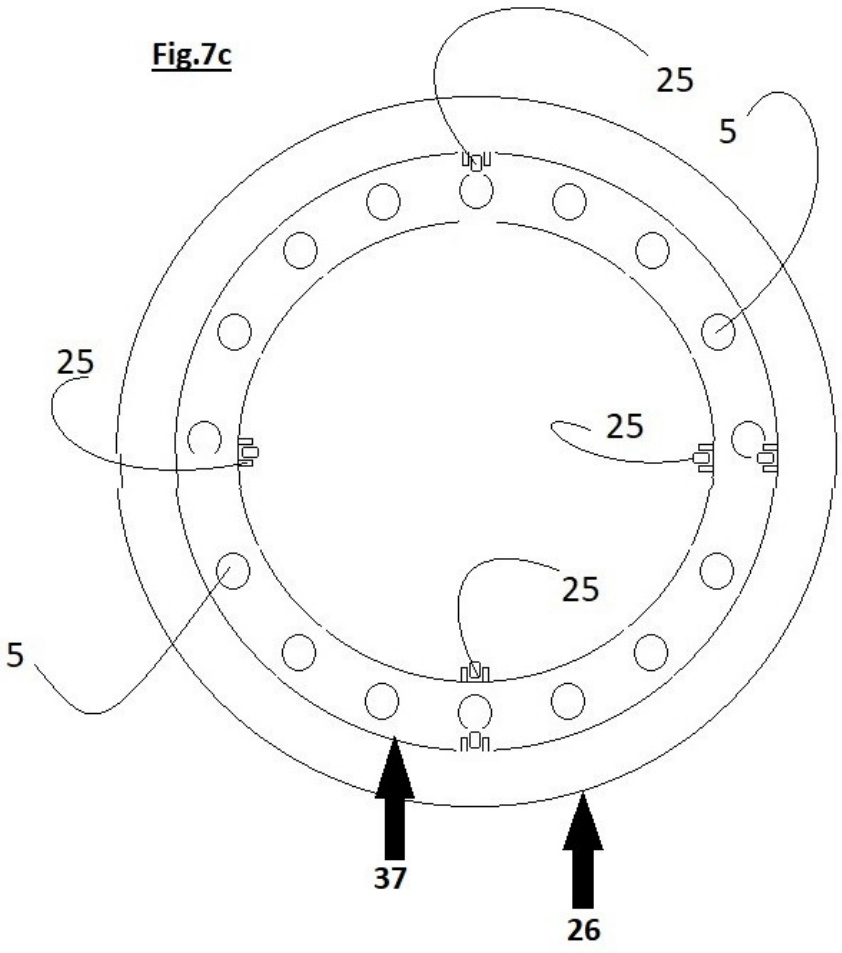


Fig.7d

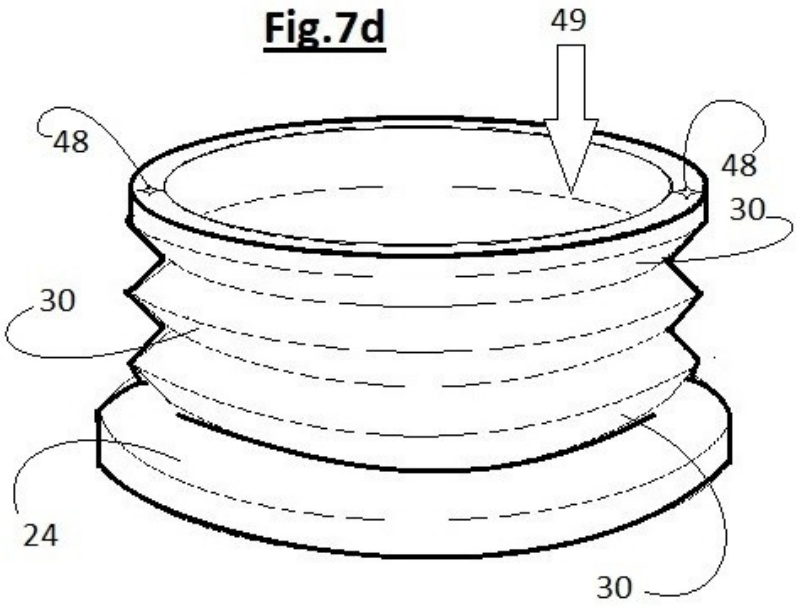


Fig.7e

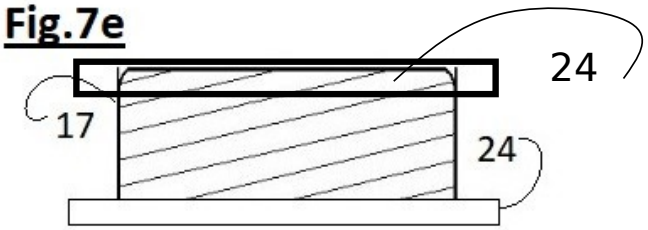
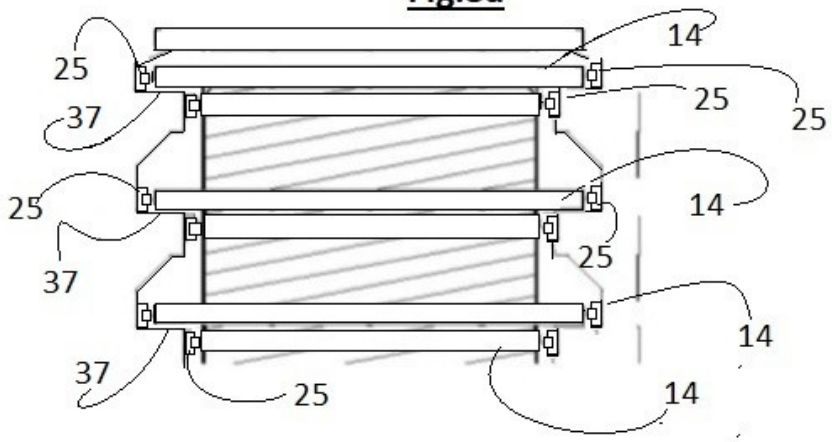


Fig.8a



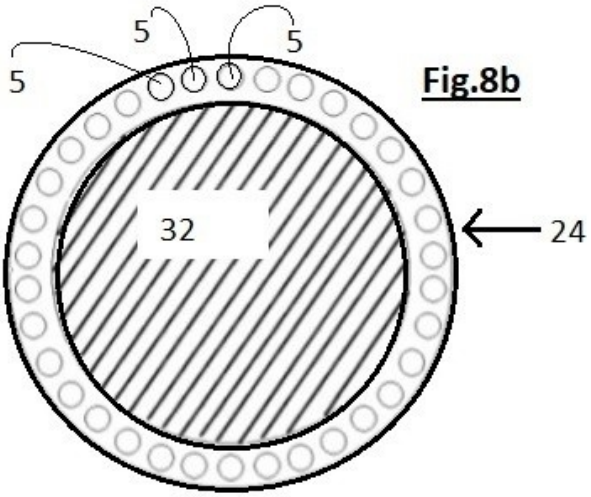


Fig.8b

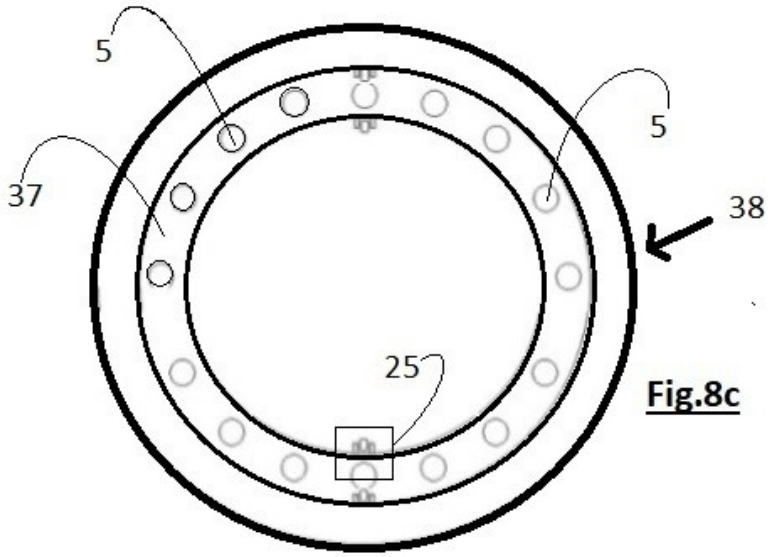
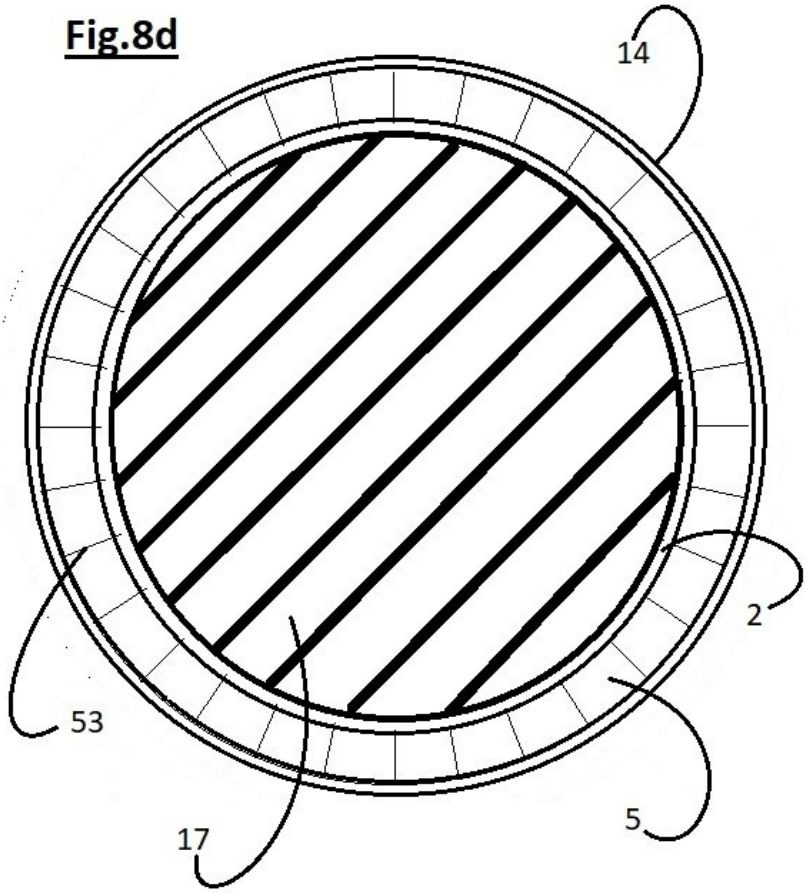


Fig.8c

Fig.8d



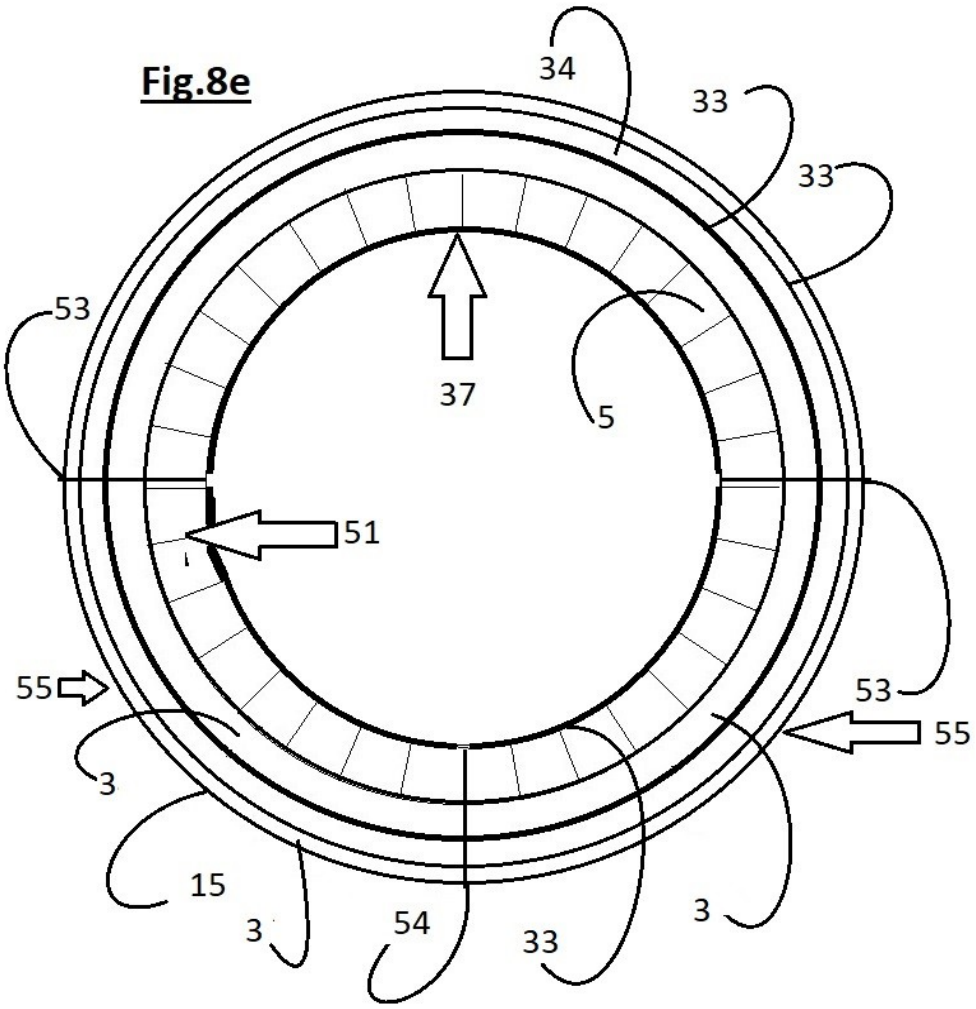


Fig.8e
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Fig.9a

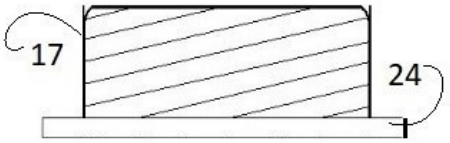
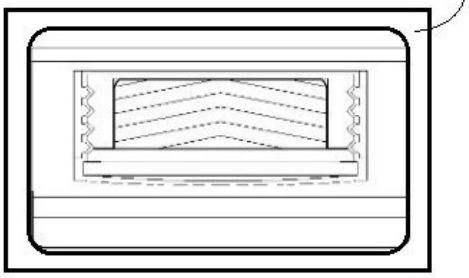


Fig.9b



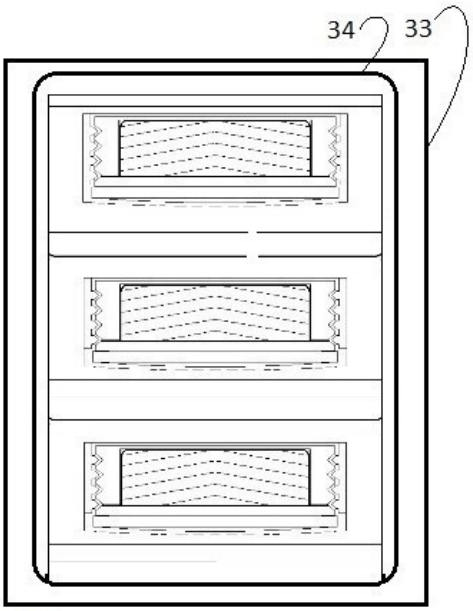


Fig.9c

Fig.9d

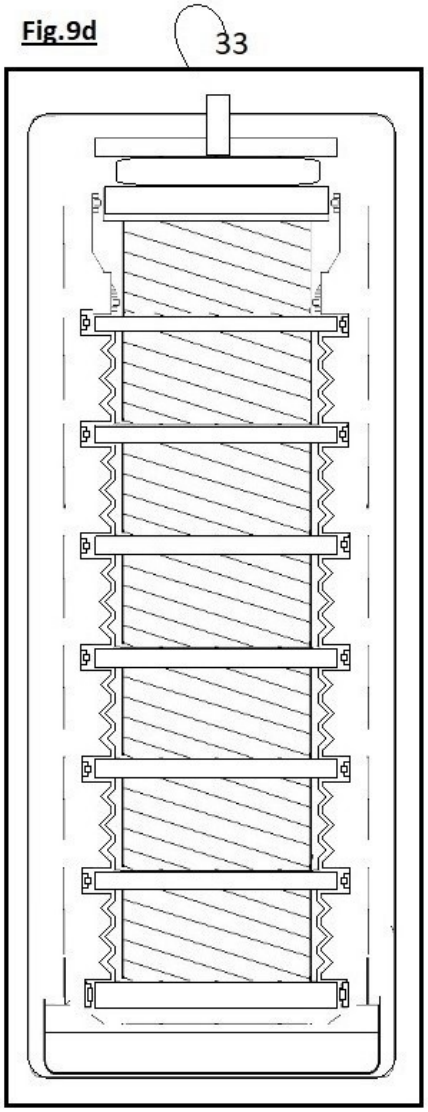


Fig.10a

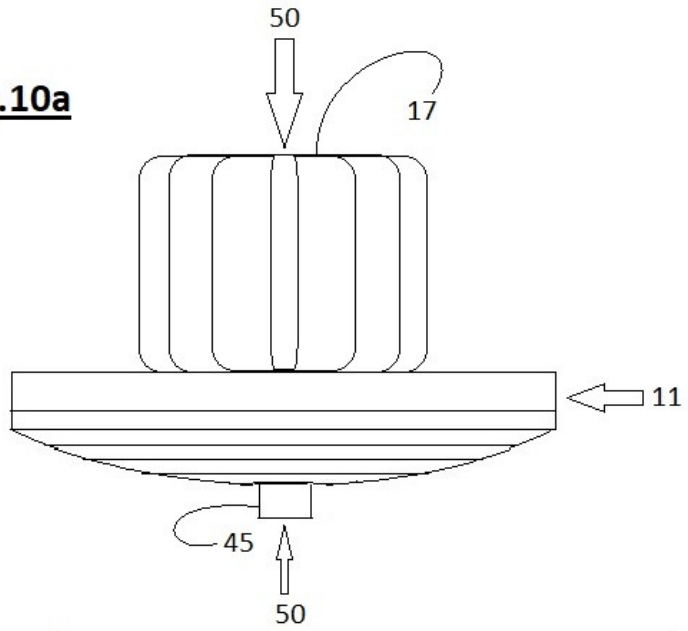


Fig.10b

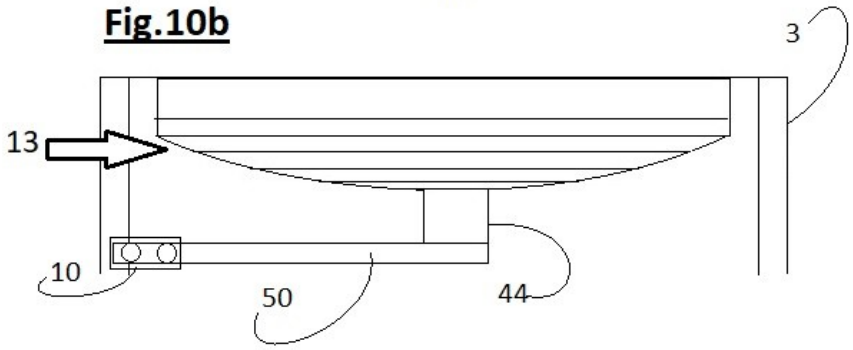


Fig.11a

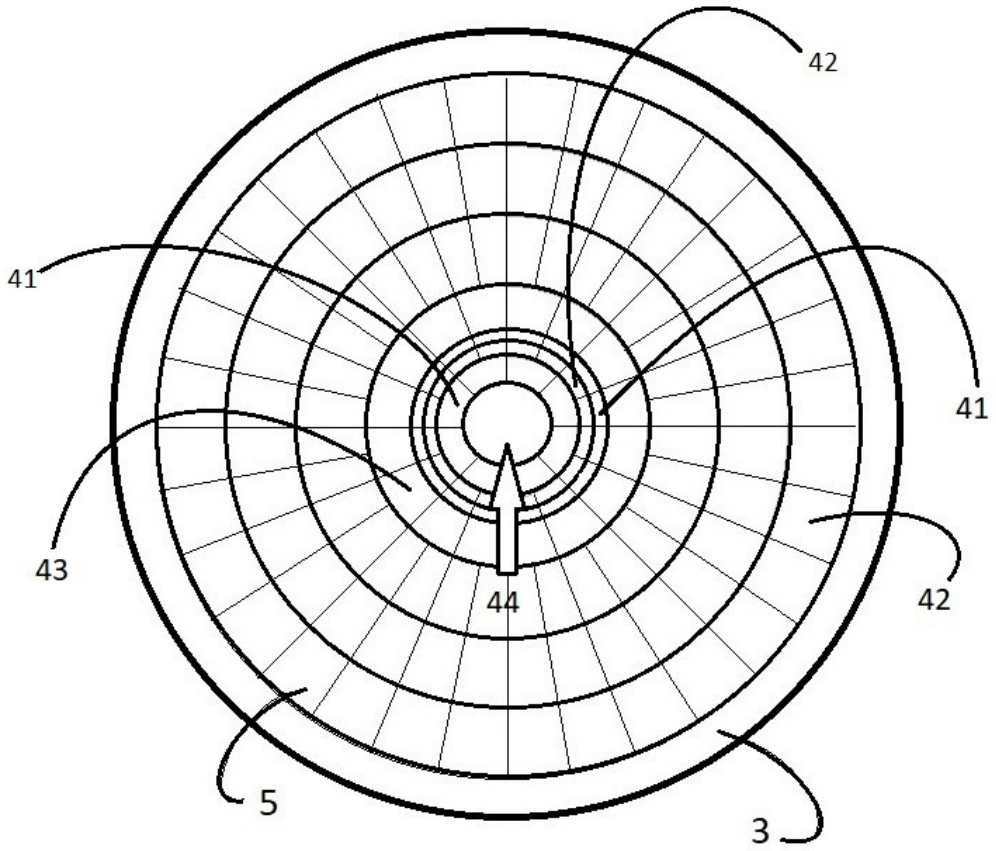


Fig.11b

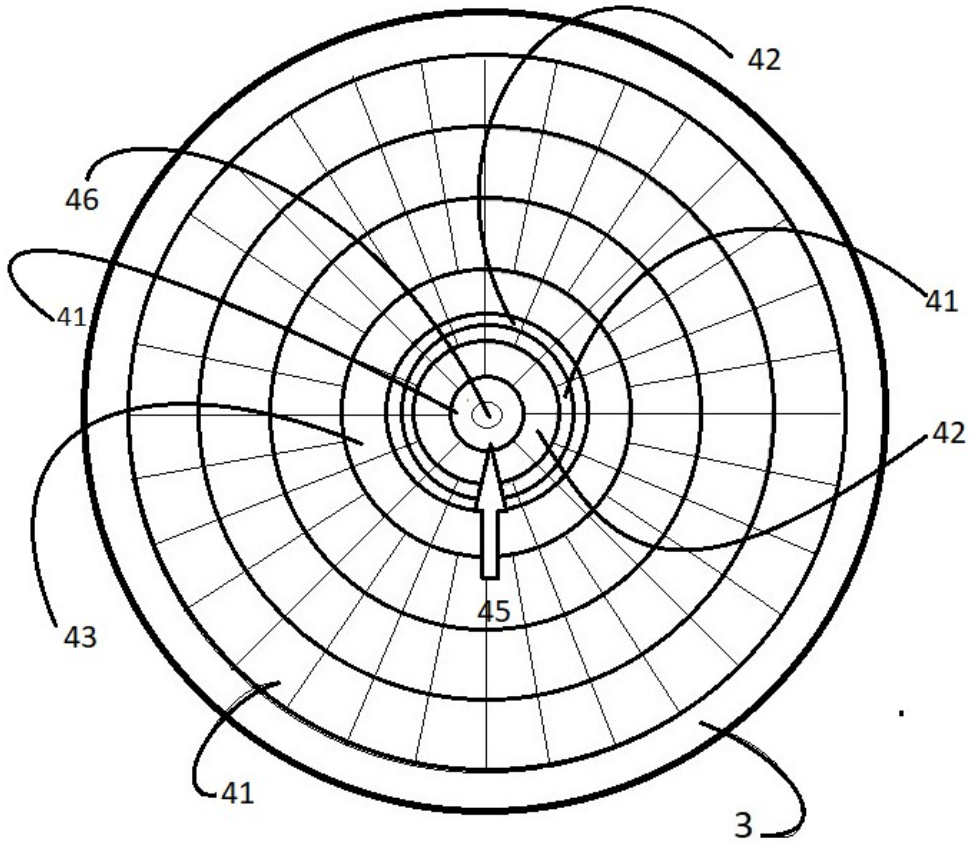


Fig.11c

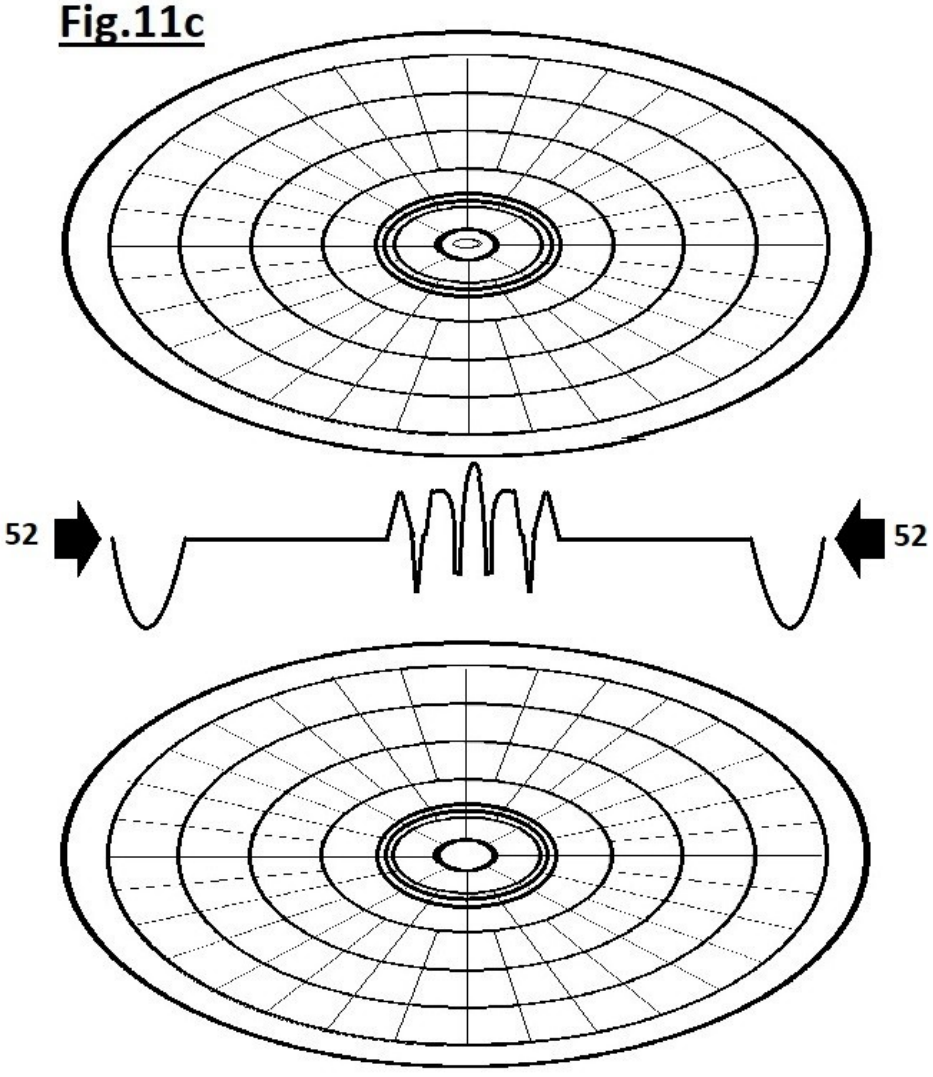


Fig.12A

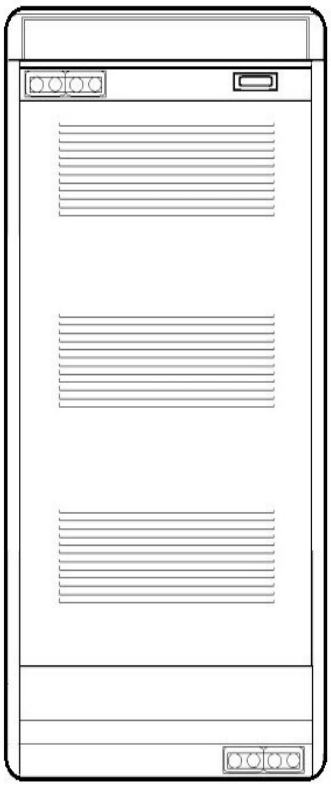
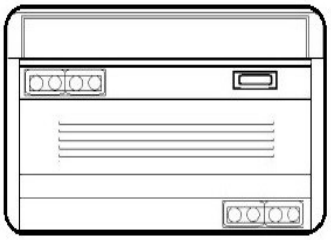


Fig.12B



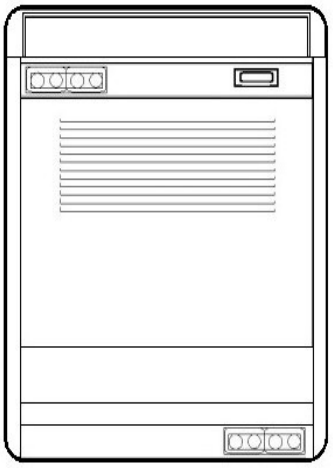


Fig.12C

FIG.13 A

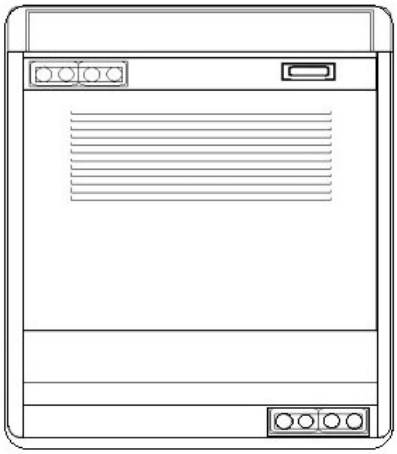
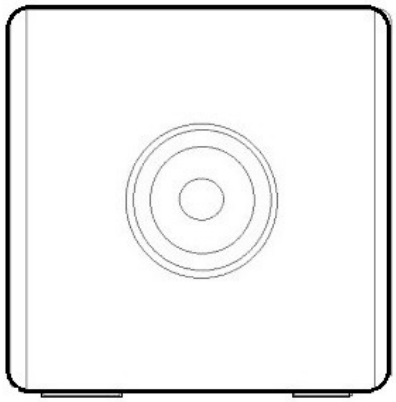


Fig.13B



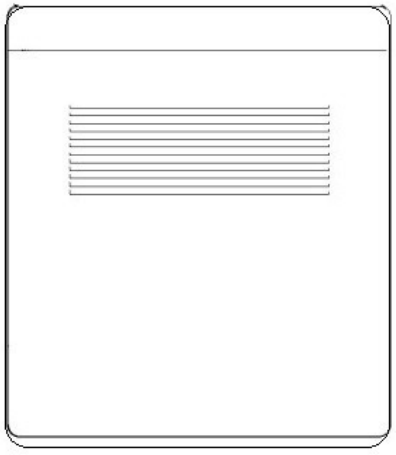


Fig.13D

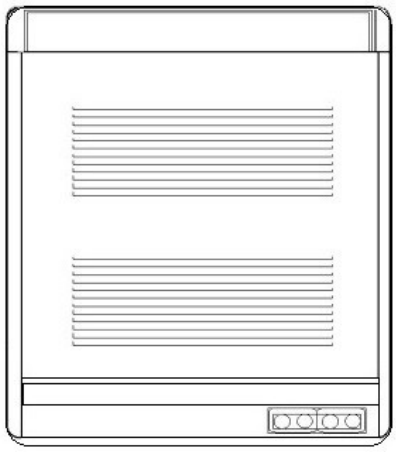


Fig.13C